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UGANDA PROTECTORATE.

ANNUAL REPORT

OF THE

Medical Department

FOR THE

Year ended 31st December, 1938.

PRICE: SHS. 3/-.

Published by Command of His Excellency the Governor.

ENTEBBE:
PRINTED BY THE GOVERNMENT PRINTER, UGANDA.
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MEDICAL DEPARTMENT,
HEADQUARTERS OFFICE,
ENTEBBE, UGANDA.
13th March, 1939.

SIR,

I have the honour to submit for the information of His Excellency the Governor and for transmission to the Right Honourable the Secretary of State, the Medical Report on the Health and Sanitary Conditions of the Uganda Protectorate for the year 1938, together with the Returns, etc., appended thereto.

I have the honour to be,
Sir,
Your obedient servant,

W. H. KAUNTZE,
Director of Medical Services.

THE HONOURABLE
THE CHIEF SECRETARY TO THE GOVERNMENT,
ENTEBBE.

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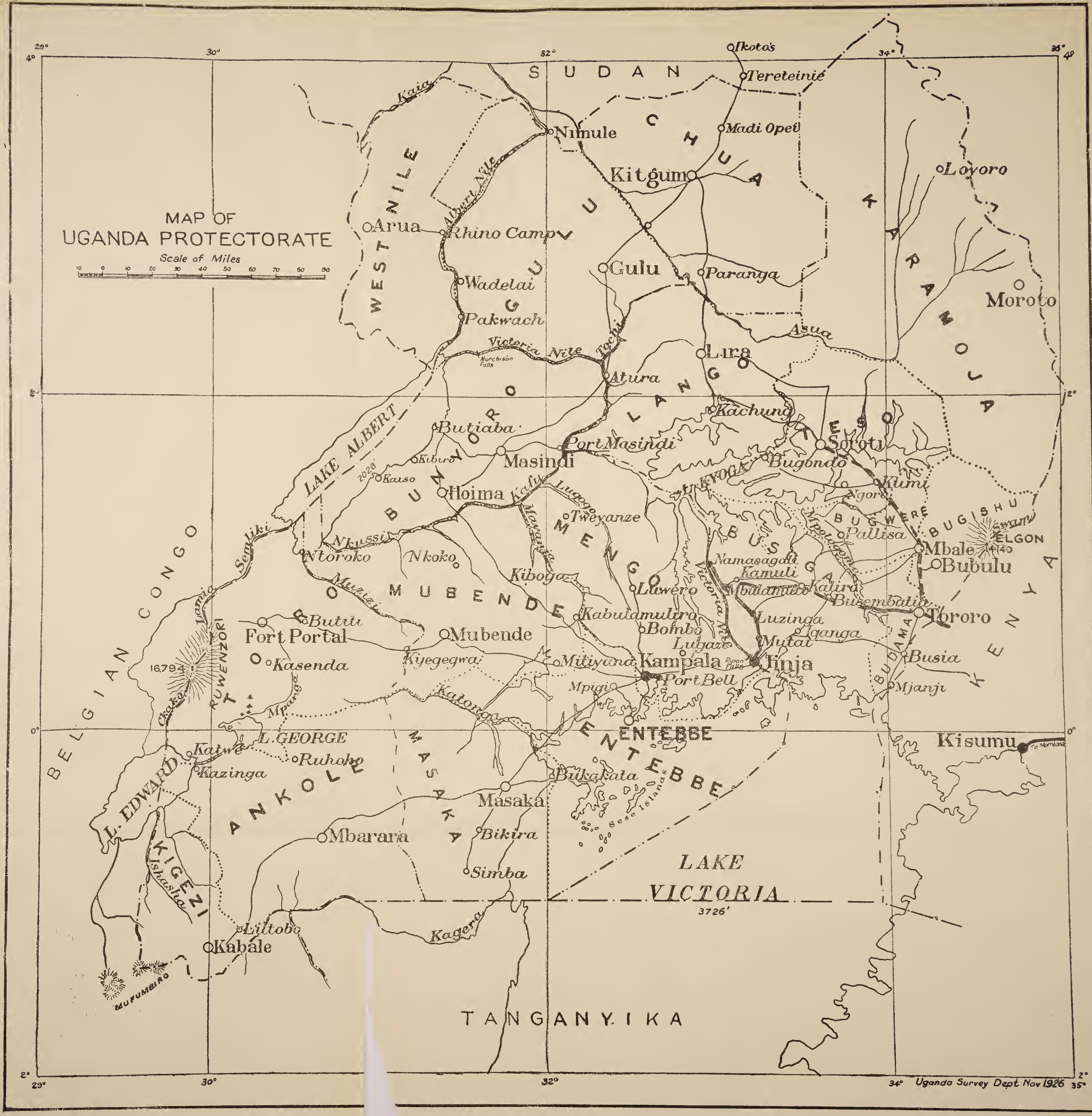

MAP OF
UGANDA PROTECTORATE

Uganda Survey Dept Nov 1926

MEDICAL DEPARTMENT.

ANNUAL REPORT

For the Year ended 31st December, 1938.

SECTION I.—ADMINISTRATION.

Staff.—Provision was made in the 1937 Estimates of expenditure for one new nursing sister and for the replacement of Dr. Loewenthal, seconded for investigation of nutritional conditions in the Protectorate, by a supernumerary medical officer who, though selected for appointment in April, did not arrive during the year as he was taking a course at the London School of Hygiene and Tropical Medicine. Incidentally the length of this course often makes it difficult to decide whether or not to allow a medical officer to take it before coming out to Uganda, which is the ideal method, but one which, if dates do not happen to fit, may mean a long period of staff shortage. A reversion to the old three months course held three times a year would ease matters considerably.

The department suffered losses during the year by the transfers of Dr. de Boer to be Director of Medical Services, Nyasaland, and of Dr. McElroy to be Senior Medical Officer, Tanganyika Territory, and the retirement on pension of Dr. Lutze-Wallace. One nursing sister retired on medical grounds, seven resigned in order to marry and one was transferred to Malaya.

2. *Distinguished visitors.*—Professor Jameson—now Sir Wilson Jameson—the Director of the London School of Hygiene and Tropical Medicine, made a rapid tour of the Northern and Eastern Provinces and part of Buganda, and inspected the Medical School. He had certain criticisms to make with regard to the teaching of the basic sciences but was pleased with the progress which had been made, and he expressed his great interest in the policy which is being followed.

Dr. Sawyer, the Director of the Health Division of the Rockefeller Foundation in New York, and Dr. Strode, Deputy Director, inspected the work which has been carried out by the Yellow Fever Institute.

Dr. Muir, the General Secretary of the British Empire Leprosy Relief Association, spent some little time at each of the leper settlements and also inspected some of the other medical activities of the department. While he was critical of certain aspects of the colonies, he was full of admiration for the work which has been carried out by Miss Laing at the Kumi Leper Settlement.

As a result of the visit of Col. Sleeman, the Chief Commissioner of the St. John's Ambulance Brigade Overseas, increased interest in First Aid work has been exhibited, and a new branch of the Association with His Excellency the Governor as Patron and Lady Mitchell as Patroness has been formed at Entebbe.

Dr. Scott, the Director of Medical Services of Tanganyika Territory, and Dr. Pridie, the Director of Medical Services of the Sudan, also paid flying visits.

Dr. A. J. R. O'Brien, the Chief Medical Adviser to the Colonial Office, spent about sixteen days in the Protectorate in October and took great interest in all that could be shown him in that short time. He had many helpful criticisms to make but on the whole was very well satisfied with the work that had been done and with the policy which was being pursued.

3. *Housing.*—Much complaint has been occasioned in the past by the paucity of accommodation and consequent overcrowding in the houses of European officials. This is being remedied as quickly as possible by the addition of an extra room to the smaller houses, while to cope with the many newly created posts, two- and one-storied houses of new design have been built for senior and junior officials respectively. Most of the older Asian houses have also been similarly improved by an additional room.

4. In the 1937 Annual Report attention was drawn to the slum conditions under which many African officials have to live, and the constant increase in trained personnel employed by Government departments has made the position worse. It is pleasing to be able to report that the Public Works Department has erected much new housing for Africans during the year, a considerable proportion of which has been in hospitals. The accommodation provided is of two types, one of which is a two-roomed house for people of the standing of a head nursing orderly or head nurse. Staff of lower grades, such as the nursing orderlies and the nurses, are housed in single rooms and, with the present cost of housing in permanent materials at such a high figure, it is impossible to give them more accommodation although it is manifestly unsatisfactory that a man with his wife and possibly two or three children should be compelled to live in a single room. This position in regard to family life can only be solved if some cheap form of house construction can be evolved.

5. In rural areas the more primitive African peasant still adheres to the round wattle and daub hut, though in the more sophisticated parts he has adopted the rectangular house with two, three, four or even more rooms, with windows and, in some cases, with tiled roofs, though more usually, even with the more affluent African, the roofing material is corrugated iron. In townships it has till recently been the policy to insist upon houses, whether built by an African or an Asian or an European, being constructed in permanent materials. Now a two-roomed house in brick or stone or cement blocks costs somewhere in

the neighbourhood of £120, and this is a sum which is entirely beyond the pockets of the great majority of Africans in this country; even the *pise de terre* house built by the department at Jinja for £80 is beyond the means of most. An experimental scheme has therefore been formulated and approved in principle by Government whereby certain areas will be allocated in Jinja for houses of varying standards, and some of these will be set aside for houses built of temporary materials, such as wattle and daub, if such are well constructed on approved specifications. In these areas Government will erect some houses in permanent materials as models, and tenants of these will be charged rents which will cover the cost of construction, together with maintenance charges and a reasonable interest on the sum advanced, and, if the lessee so desires, an additional sum the payment of which will ensure that at the end of some twenty to forty years the house will become his property. Provision is made in this scheme for surveyed plots on which Africans can put up their own houses provided that the plans are approved by the Township Authority, and that the dwelling is built to the set building line. The plots will be of sufficient size to enable a man to keep a largish vegetable garden from which he can supply many of his wants in the way of food, but no bananas or similar high-standing crops will be permitted except in one area where larger plots upon a short term lease immediately behind the housing plot are made available for allotment as shamba plots, which, should housing conditions in the township then demand it, will be converted into building plots when the leases expire. It is anticipated that in areas where wattle and daub houses are permitted, a superior type will not cost more than some £20 to £30, a very different sum to the £120 to £150 which would be required for a two- or three-roomed house in brick or cement blocks. In last year's Annual Report mention was made of experiments with new methods of construction in an endeavour to reduce building costs. A house has been erected on the lines then suggested, but its cost was higher than had been expected (£35 for a two-roomed house), largely because the packing case wood used in the construction of the roof proved as costly as corrugated iron. The Colas floor was however entirely satisfactory. Investigations on similar lines using other supporting materials for the roof are in progress.

6. Some very interesting facts have been elicited recently in regard to the income of peasants in Uganda and the rents paid by Africans in the neighbourhood of Kampala. In some of the mutala surveys which have been carried out by Agricultural Officers in different parts of the country special attention has been paid to an estimation of the average cash income derived by a peasant family from the sale of crops, and it is surprising in how many places this is below Shs. 100 a year though of course this does not take into account the sale of stock and other sources of revenue. But even if this is allowed for, it is evident that to ask people who are in receipt of incomes of this size, to put up houses in brick with cement floors and iron roof is demanding more than they can usually afford.

Consideration has been given by this Department to a plan whereby African peasants desiring to build houses in permanent materials might be assisted by being allowed the free use of a brick-making machine and of Government-paid African artizans working under the supervision of an European Health Inspector, the peasant providing only the building materials and the unskilled labour. It is however felt that it would be very unwise to do this as it would inevitably give the African a false idea of the cost of housing; an additional objection is that of necessity such teams must be limited in number and therefore only a few could profit by them. Better far to teach the peasant to build hygienic houses in less costly material and be content to wait for improved nutrition and better methods of agriculture so to increase his annual income as to enable him to erect houses in permanent materials.

It is not irrelevant here to draw attention to the great changes in the type of African housing which have taken place in the Buganda Kingdom in the last five years. Rectangular houses with proper windows and ventilation are now common; most have a small flower garden, while through the open door of the house can often be seen a table covered with a clean cloth and decorated by a vase of flowers. In the West Nile District constant lecturing by the medical officer with insistence on repetition of the lesson by his hearers, has produced a form of health catechism which now seems to be known by all. The daily repetition of the statement that the house must have a window, leads to most new houses being built with windows, and presumably if the African is taught to repeat daily that the eating of meat helps to keep a man healthy, he will gradually come to look on meat as one of the essentials in his dietary.

Another type of survey was carried out in the neighbourhood of Kampala by an African Assistant Medical Officer, and he, commenting most adversely on the overcrowded conditions which exist on the outskirts of Kampala, finds that the majority of Africans there are housed in grass-roofed wattle and daub huts which are huddled together and let at rents approximating, in the case of the whole house, Shs. 3 to Shs. 6 a month, and in the case of a single room in a house 50 cents a month, this latter figure being for each male adult occupying the room. Most of the people who rent these single rooms, are casual labourers whose wages rarely exceed Shs. 12 a month. With this they must not only pay their rent but also purchase food in the market as there is no land available for cultivation in the neighbourhood of their lodgings, though a few may eke out their earnings by working on Sundays for neighbouring landowners. Such food is estimated to cost some Shs. 5 to Shs. 6 monthly. Most of these Africans come to Kampala in the hope of earning their taxes quickly and then returning to their homes, and they therefore put by as much as possible for this purpose, reducing their expenditure on food to a minimum. This, as the African Assistant Medical Officer points out, is producing in them a sub-nutritional condition and in some cases definite signs of malnutrition. These are facts which must be borne in mind when embarking on any housing scheme.

7. The housing conditions of Asians in townships and trading centres have improved to a great extent during the year as a result of constant inspection, and even in rural areas compounds are now kept in such a state of cleanliness as would have been unbelievable three or four years ago. Buildings are being erected at the present time in accordance with the old Township Rules, but draft Building Rules under the Public Health Ordinance, which have been the subject of discussion for nearly two years, are now on the eve of promulgation. They have just undergone a final revision based on experience gained from the experimental application of them in certain places which has shown the advisability of modification in some of the rules as originally formulated. In the older bazaars insanitary conditions have arisen in the course of years which are difficult to remedy without drastic reconstruction. Some of these unhygienic conditions, particularly those resulting from unsanctioned additions, have been removed during the year, and, while with some it has been possible to do this by persuasion, in others action has had to be taken through the Courts in cases where owners were obdurate and where the unhygienic conditions had become a danger not only to themselves but also to their neighbours.

In Kampala special difficulties have arisen owing to the large influx of population, particularly Asian and African who are attracted by the public works in progress there. As a result there has been, and still is, extremely serious overcrowding in the bazaar; as alternative housing is not available court orders to abate the nuisance cannot be obtained. Steps have been taken to release more building plots, but it will take time to erect enough accommodation to relieve congestion adequately.

8. The King's African Rifles cantonment which has been under construction at Jinja for the past twelve months, is now approaching completion and should be ready for occupation by the middle of 1939. The police lines at Kampala were completed and occupied during 1938 and a start was made with the erection of lines for the depot. This development has not only improved the housing conditions of the police force but has also given increased amenity to the neighbourhood since adjacent swampy land has been drained. It is hoped that when all these works have been completed, the area will be practically free from mosquitoes and a long-existent menace to the bazaar in Kampala will then have been removed.

9. *Disposal of night soil and rubbish.*—The sewerage and stormwater drainage scheme for Kampala is well on its way to completion. The original scheme which was limited to part only of Kampala has been extended to the whole of the township which includes also Makerere and Mulago, and a low level sewer is being laid which will take the drainage of the railway area, Old Kampala and that part of Nsambya Hill on which the police lines are situated. In Entebbe considerable progress has been made in the installation of septic tank systems for the European houses; it is probable that a short sewer will be necessary for the more crowded bazaar area as little land is available there for disposal of the

effluent from tanks. A separate sewer to serve the King's African Rifles cantonment, Jinja, is to be constructed early in the new year, while a septic tank system is being installed at the Native Hospital in that town.

10. The difficulties of night soil disposal in rural areas are still unsolved. In most places pit latrines have been, and are still, the common method of disposal and, except for the labour involved in digging them, are reasonably satisfactory. Many country schools however have the greatest difficulty in digging pits sufficiently large and deep for the number of children attending. In Fort Portal a modification of the Indore Method has been instituted to deal with the township night soil and the bazaar rubbish, and has proved extremely satisfactory. Unfortunately no demand has yet arisen for the final product except for European gardens, nor have the hopes that the local African would make use of it to improve his crops been fulfilled, though on an experimental plot in the neighbourhood it is reported that its use has resulted in a thirty per cent increase in the tobacco crop. The question whether helminthic ova are rendered non-infective by the method, has not yet been settled. Dr. Boase is publishing in the January, 1939, number of *The East African Medical Journal* a paper describing the modified method in use at Fort Portal. Another experiment in progress in the Fort Portal area is the lining with cement of the lower three feet of an ordinary pit latrine so as to retain liquids as well as solids, thereby encouraging liquefaction of the night soil, the liquid leaking away gradually above the level of the cement lining. The method has been instituted too recently to enable one to judge of its efficiency. Another type of latrine, modified from a design which was described in the Annual Medical Report of the Gold Coast for 1936, is to be constructed very shortly in Entebbe at a school where there is no piped water supply. It is hoped that it will be a test as to its effectiveness as an alternative to a pit latrine in schools in rural areas where water has to be carried from a stream or well.

Efforts are being made in conjunction with the Agricultural Department to induce peasants to make use of their garbage and boma manure by composting it with grass and other materials for use on their shambas, but it is naturally a slow and uphill process.

11. *Water Supplies.*—Considerable attention has been paid to the improvement of water supplies, both rural and urban. Filtration and chlorination plants have been installed at Entebbe and Mbale and in Kampala a second water main has been laid, consequent partly upon the increased demand for water associated with the sewerage system and partly upon the necessity for taking up the old corroded main and relining it with spun cement. It is however in rural areas that better and more convenient water supplies are urgently required, and this is particularly so in the drier parts of the country where springs and streams are scarce and the population may have to walk miles in order to obtain water for household cooking and washing.

Much progress has been made during the year by the Geological Survey in creating a better water supply by sinking bore holes, while in other areas unsuitable for boring, that Department is constructing collecting tanks to conserve storm water.

Efforts continue to be made by this Department with grants from the Native Administrations to improve existing springs and wells by protecting them from contamination and by providing a small reservoir with a lead-off pipe.

12. *Nutrition Surveys.*—A medical officer was seconded for nutritional investigation at the beginning of the year and, except when, owing to staff deficiencies, he had to be withdrawn for a few weeks to take charge of districts temporarily bereft of the district medical officer, he was able to give his whole time to health surveys in different parts of the country. His investigations have been mostly concerned with the Teso District, an area in which soil erosion is causing considerable anxiety. Some of them have already been reported in the first pamphlet issued by the Nutrition Sub-Committee of the Agricultural Survey Committee, and others will be published early in 1939. Dr. Loewenthal reports that the main results obtained this year indicate that nutritional defects in Teso are due partly to qualitative and partly to quantitative food deficiencies which are to a large extent associated with climatic, social and economic difficulties in the area, all of which have an adverse effect on agriculture. The surveys have also confirmed the finding which was reported in last year's annual report, that leg ulcer is not found amongst those people in Teso who supplement their vegetarian diet with fish. Other investigations in various parts of the country have been concerned with the giving of supplementary milk, skimmed milk, vegetables and meat to African school children. The results obtained show that significant increases in weight and height occur in those who are given milk and meat, but that vegetables and skimmed milk have little or no effect, possibly because the additions are not sufficient to counteract a deficient home diet.

A very interesting experiment was arranged by Dr. Loewenthal in association with Mr. Dugmore, who has been responsible for the building of the new Kampala Railway Station. Two hundred Banyaruanda, members of a tribe which is notorious for poor physique and inefficient work, were given a full diet which included meat, while certain groups received additional treatment such as prophylactic quinine, anti-helminthic treatment, cod-liver oil, etc. The results obtained have shown clearly that on a good diet with prophylactic quinine these people become quite as efficient labourers as the best drawn from Uganda. The nutritional officer recorded that "these men could be given the hardest manual labour and became as good as any other type of local labour in physical condition and output of work. In fact the results showed that the extra output paid for the extra diet several times over". This result is of great interest because the constant attempts which this department has made to improve the diet of Africans employed in industrial undertakings, have always been opposed by employers on the grounds of cost.

Dr. Loewenthal has spent much time this year in developing a health index based upon observable facts rather than upon the clinical assessment of a nutritional state. His methods were explained in a paper read at the joint meeting of the East African branches of the British Medical Association held in Nairobi in August and have been published in the December number of *The East African Medical Journal.* It is of interest to record that as a result of the mutala surveys in Teso, Dr. Loewenthal concluded that sweet potatoes played a great part in the maintenance of health and in avoidance of vitamin A deficiency. Later on during the course of a survey amongst the Bakiga in Kigezi, he found that the people, whose main diet is sweet potatoes, showed marked evidence of vitamin A deficiency, an observation in direct contradiction to his previous conclusion. A clue to the solution of the problem was supplied by the Government Analyst in the Tanganyika Territory, Mr. Raymond, who suggested that the explanation is probably to be found in the fact that, while the local variety of sweet potato has only a very low percentage of vitamin A, its leaves contain a considerable amount. It is known that the Bakiga do not eat green leaves, while hearsay evidence is to the effect that the Iteso commonly include sweet potato leaves in the relishes eaten with their staple food. This question is under re-examination. In connection with nutrition it may be noted that Dr. Trowell has had under investigation cases of nutritional anaemia at Mulago Hospital, and read a paper on the subject at the Nairobi meeting mentioned above.

13. *Health of school children.*—There has been a distinct improvement in school buildings and a great effort has been made by the various Mission Societies to bring their accommodation, both dormitory and schoolroom, into line with the School Building Rules. Even bush schools have tried to provide adequate lighting and ventilation in their rooms and to construct pit latrines. It is still not realised sufficiently that this is an open-air country and that walls necessary in colder places can be dispensed with here. Comments have been made in previous annual reports on the unsatisfactory housing of catechumens at some of the mission stations. This has now been remedied to a very large extent and reasonably good accommodation provided.

The examination of school children in selected schools has been carried on as in the past. In Kampala the Medical Officer of Health reported early in the year that, in spite of his recommendations that certain defects found in the children at the Indian School required treatment, nothing had been done when he next inspected them, the excuse being that the parents had no money to pay a doctor. Arrangements have therefore been made whereby children, who are recommended by the Medical Officer of Health for treatment, can be attended free at the Asiatic Hospital.

14. *Labour Conditions.*—Labour conditions were the subject of enquiry by a special Commission which issued its report just before the close of the year. An important advance in improving labour conditions was made with the enacting of the Employment of Children Ordinance which raised the age limit for employment from fourteen to sixteen, and prohibited the employment of children in industrial undertakings except such as might be exempted by the Governor.

15. *Prisons.*—Prison policy has been under consideration and the number of prisons, particularly those of Native Administrations, has now been limited. Luzira will be retained as a place of incarceration for habitual criminals while first offenders will be dealt with in provincial prisons which will be run more on the lines of detention camps. Associated with these provincial prisons will be shambas which will enable the prisons to be largely self-supporting in regard to food. These measures should to a large extent remove past criticisms of the diet and accommodation provided in district gaols.

16. *Anti-Malarial Work.*—Considerable advances have been made in anti-malarial work in the Eastern Province stations. This is particularly the case in Mbale where the swamps immediately adjoining the bazaar and European residences have been drained by sub-soil drains emptying into open concrete channels. This work is still not completed but records already show a great reduction in the numbers of mosquitoes found in the township. Extensions of the system which have been approved, will not only improve conditions still further but will also protect the new provincial gaol which is to be sited just outside Mbale.

In Soroti the work begun three years ago for the conversion into French drains of the enormous chasms which stormwater had cut into the sandy soil round the station, has been carried on. In many places the old drainage line has been abandoned and a new channel on a parallel line cut and graded and then filled with broken stone, the top layer of which is extended outwards over the ground bordering the channel in such a manner that its upper surface presents a shallow concavity when the drain is seen in cross section. The stormwater sweeps down over the upper surface of the stones which protect the soil from erosion, while the normal flow of water in the drain finds its way amongst the rubble at the bottom of the channel. It has been found advisable to provide a small channel built of roughly squared stone along the invert of the drain before filling the latter with broken stone.

In Tororo experience has shown that, contrary to results elsewhere, transpiration from the eucalyptus plantations is insufficient to dry up the swamps completely. Work is therefore in progress to trace any remaining seepages to their source and to collect them by sub-soil drains emptying into the main drainage channel.

17. In accordance with the policy recorded in last year's report of giving as much responsibility to the African staff as possible, medical officers have been urged to allow the Senior African Medical Assistants in the district hospital to take full charge of it, and in many cases have

done so to a greater or lesser degree, depending on the competence of the Assistant concerned. It was felt that the title "Senior African Medical Assistant" was not entirely suitable and Government approved of its alteration to "African Assistant Medical Officer" from the beginning of 1939. A new step has been taken in health administration in the Protectorate by the appointment of an African Assistant Medical Officer as Assistant Medical Officer of Health to the Native Government of Buganda. The appointment should help in solving the slum conditions in the area round Kampala, since most of these have arisen as a result of the repeated sub-division of land by African landowners, no minimum size for plots being laid down as yet in law and no provision being made for access by road or for ordinary sanitary conveniences. It is hoped that landowners may be persuaded to consent to the proper planning of this area under the advice of this African medical officer. His Highness the Kabaka has already set an example by giving permission for some of his land to be surveyed and planned, and it is hoped that his lead will be followed by other members of the Native Government who own land in the immediate vicinity of Kampala.

18. *Maternity and Child Welfare.*—As usual maternity and child welfare work has taken up a very large share of the time of medical officers and sisters in districts. Two new centres have been opened and many existing centres improved or even completely rebuilt. A considerable increase in the number of maternity cases is recorded in later paragraphs in this report, but it must be remembered that it is not only the number of children who are born in maternity centres that count. Ante-natal attendance is even more important and it is a welcome sign that the habit is growing of expectant mothers attending clinics held by the Sisters at various dispensaries and that they display increasing readiness to accept advice. Child welfare clinics are also better attended, though it is difficult to assess the value of the figures given by different district medical officers since some record only healthy children, those requiring any treatment, however little, being returned in general dispensary figures, whereas others include cases of minor ailments in the child welfare schedules. There is however no question of the great popularity of this side of the department's work, and there is a constant demand in all districts for the opening of additional centres. Unfortunately the number which can be supervised by an European nursing sister is limited, as is the cadre of such sisters. It is therefore impossible to open as many centres as are really necessary until African nurses attain a higher standard of education and training, fitting them for supervisory duties. The experiment of appointing a district midwife in Hoima begun last year is still in progress. Unfortunately though the midwife has been able to visit expectant mothers in their homes before delivery, her services have not yet been demanded for the actual confinement.

19. *Training of Africans.*—The future of medical work in this country is dependent on the training of Africans to a standard which

will enable them to take over many of the duties which are at present performed by Europeans, and hence the educational work of the department is one of its most important activities. One of the outstanding events of the year therefore was the holding of an Inter-Territorial Conference to implement the recommendations of the Makerere Commission. As a result the Makerere College Ordinance was passed towards the end of the year; this had the effect of placing the College under the control of a Council and making it largely independent of Government. The Medical School then became one of the Faculties of the College, though its organisation otherwise remained unchanged.

The number of medical students was much the same in 1938 as in previous years, and four passed the Final Examination in December, having had the advantage of the additional year's clinical teaching mentioned in the last report and being granted a Diploma from the Joint East African Examining Board in Medicine. A new departure was made by the appointment of one of the African Assistant Medical Officers as assistant to the surgical specialist. The experiment has been a great success and as a result it is intended to appoint similar assistants to the physician and the obstetrician as soon as suitable officers are available. Professor Jameson during his visit spent a considerable time in discussing the medical curriculum and in inspecting African Assistant Medical Officers at their work. While he considered the teaching of medicine, surgery, pathology and midwifery as satisfactory, he thought the time given to anatomy and physiology (one year) too short, and was also very critical of the students' knowledge of the basic sciences. It is pleasing to know that every effort is being made to complete the new science laboratories at an early date as until these are ready it is impossible to teach chemistry, physics or biology satisfactorily.

Professor Jameson also criticised the building used at present as a Medical School, and Dr. O'Brien was of opinion that it was urgent that the scheme for a new school should be proceeded with as soon as possible. The position is becoming more acute as the number of students taking anatomy and physiology will be twelve in 1939 and possibly twenty in 1940. It seems probable that unless more accommodation is available before then that some limitation will have to be put on the number of entrants to the school.

The new East African Examining Board for Sanitary Inspectors which has been formed under the auspices of the Royal Sanitary Institute, held its first examination in December. Out of the ten African candidates who sat, eight passed, a very satisfactory result, the credit for which is largely due to Mr. Jordan, the Instructor in Hygiene, who was responsible for their training. These African sanitary inspectors will be posted out to districts where for some time they will be under the supervision of an European Health Inspector before being given independent posts.

The nursing orderly class has followed the course approved in 1937, which covers a period of two years with an additional year's instruction for specially selected students who are considered suitable for charge posts. Since the new scale of salaries was introduced the number of applications to join the class has been satisfactory.

The system whereby African female nurses are trained for Government service at the Church Missionary Society's hospital at Mengo has been extended to the Catholic Mission hospital at Nsambya. All are required to pass the Government examination in nursing. Owing to the small number of girls in training who have been given adequate instruction in English, the concession in regard to taking the examination in Luganda mentioned in last year's report has been prolonged to the end of 1939 provided that the lower standard examination in Kiswahili is also passed. Nurses trained under this scheme have been reported on very favourably by the hospitals to which they have been sent, particularly in regard to the improved smartness and tidiness evoked by their example. It is early days yet to expect too great things from these nurses because the standard of female education in Uganda has been very definitely below that of males, and for this reason it has been found impossible so far to select suitable candidates for training as district health nurses on the lines suggested in last year's report.

20. *Asian Nursing Staff.*—Difficulties have arisen this year in obtaining Asian nurses for the Asiatic Hospital in Kampala. Three of the nurses resigned on grounds of health or to get married, and application to India for replacements brought no suitable candidates. Fortunately a Goanese girl at the Nsambya Hospital, who finished a three-year course of training at the end of the year, and who passed the Government examination, agreed to enter Government service. Government has now approved the training of Asian nurses by the Missions on the same terms as Africans.

21. *Hospitals.*—Turning now to the curative services of the department, the new hospital at Tororo was opened in the early part of the year and has proved very popular. The new hospital at Kitgum is in course of construction and it is hoped that it will be finished in the early part of 1939. Mulago hospital has been constantly overcrowded, and this, coupled with the fact that being one of the early hospitals erected in the country its wards are not as up to date as they might be, has made it difficult to maintain the standard usually associated with teaching hospitals. The position was made worse at the close of the year by the arrival of the workmen to instal electric light and a water-borne sewerage system. It is therefore pleasing to record that provision has been made in the 1939 estimates for the erection of a 4-storey block which will house the special departments (X-ray, ear, nose and throat, eyes and dentistry) on the ground floor and will have three ward units on the floors above. This block will provide accommodation for approximately 250 patients bringing the total number of beds in the hospital to over 500, and will ease the position very considerably. Meanwhile as a temporary measure the new X-ray plant has been placed in the building formerly occupied by the Agricultural Laboratory and now in course of being converted for use as the Medical Laboratory.

This building will give ample accommodation for efficient laboratory work to be done and will be welcome after the cramped quarters used by the laboratory staff for several years.

22. *Dispensaries.*—A complete dispensary scheme for the whole country is being drawn up by provincial medical officers. Within each district there will be a central hospital as the main unit, fully equipped to deal with all kinds of cases, a dispensary in each saza, and, as satellites to each dispensary, a ring of first aid posts which may be opened once, twice or thrice a week by itinerant staff based on the dispensary. An ambulance service, such as is now in existence in three out of four districts in the Eastern Province, and one out of three in Buganda (provision has been made for a second ambulance in Buganda in 1939), will be essential if aid posts and dispensaries are to send all serious cases to the district hospital as it is intended they should. This scheme will take into account the concentration of the population and is designed to place medical aid within five miles of the majority of the people in the Protectorate. It can of course only be brought into being slowly and will require modifications from time to time as population conditions change. The aid posts will not be treatment centres only; indeed that will be the least of their functions. They will be health and social centres whose main aim will be to educate the surrounding folk in the way of healthy living. It is hoped that not only medical personnel but also that of other departments engaged in promoting social welfare, will live at these centres so that all such work will be carried out with complete co-operation.

23. *Endemic Diseases.*—There is little to report in connection with endemic disease. There has been much the same incidence of sleeping sickness in the West Nile District as in the preceding year but it is thought that the position there is now under control as investigations by Mr. Gibbins into the entomological aspect of the "rod" type of clearing described in previous reports, show that this is reasonably effective in lowering the density of fly and is probably more efficient than the large deep clearings previously advocated. It is certainly much less costly. In association with hand-catching it may be possible to use it to clear blocks of forest which it is inadvisable to remove completely. Powers were taken to control the fishing industry at Katunguru and Katwe, the rapid development of which was mentioned in last year's report. The pass system controlling movements of population across the Uganda–Sudan border, is working satisfactorily, but that dealing similarly with immigration through Tanganyika appears to have fallen into disuse. Representations to obtain its re-establishment have been made.

24. A visit was paid to this country by Dr. Muir, the General Secretary to the British Empire Leprosy Relief Association. He had certain criticisms to offer in regard to the Bunyoni Leper Colony and the Nyenga Settlement. He was very anxious that vocational therapy should be introduced at Bunyoni and recommended that a Toc H worker should be sent out to start it there. With the Kumi Colony Dr. Muir expressed himself very well pleased, but he felt that Miss Laing, who is

in charge of it, was overworked and should have an assistant. It is probable that the Toc H worker who is proposed for Bunyoni, will later on be transferred to Kumi to assist in the work there. There is little to record in regard to leprosy other than this visit. Better accommodation for lepers has been built at all settlements from the special building grant which Government has been making for the past two years, and the wattle and daub huts with which these colonies started, are gradually being replaced by brick houses.

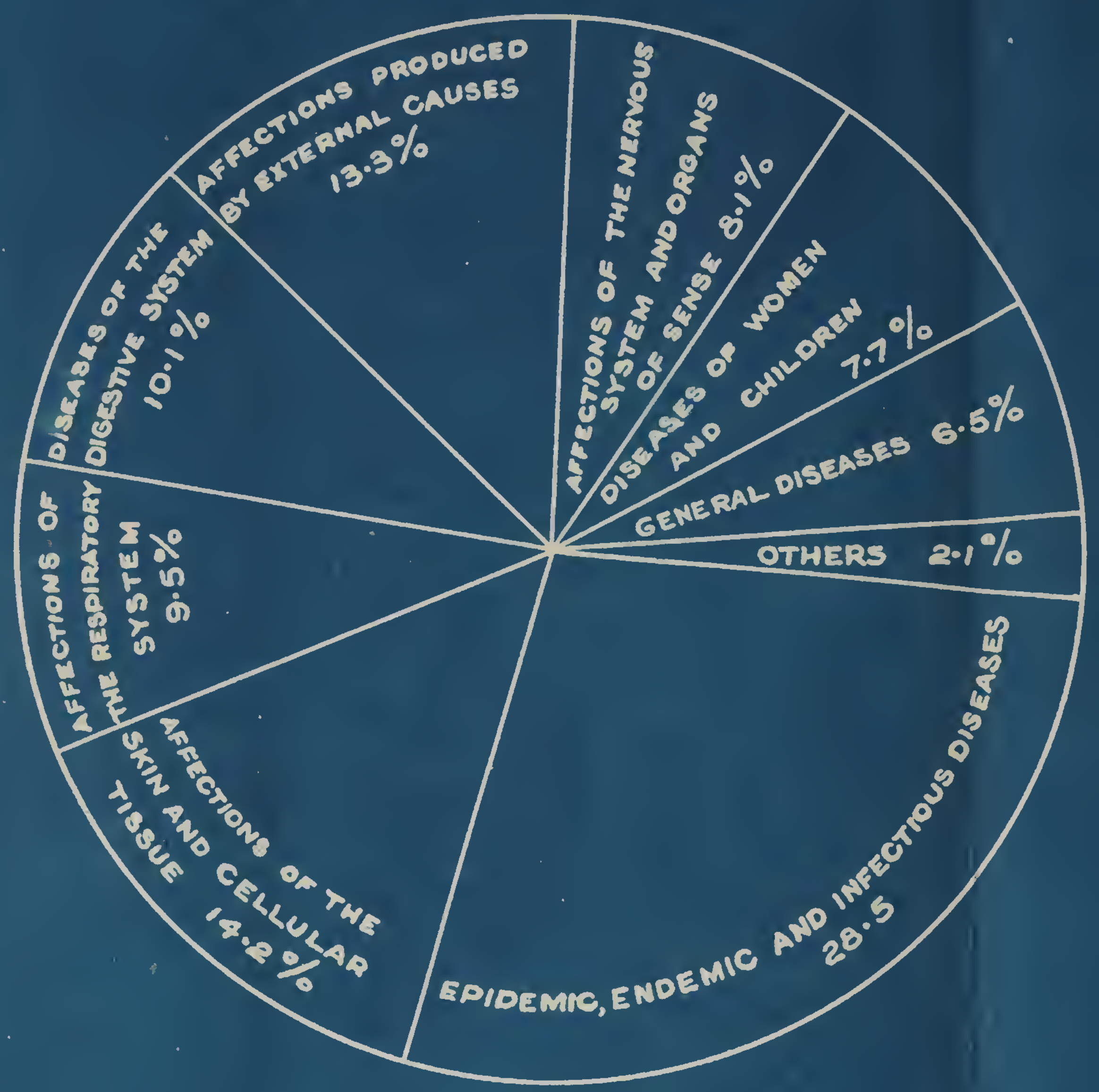
25. *Epidemic Diseases.*—Epidemic diseases have not occurred to any degree. There has been some increase in the incidence of typhoid and there has also been a small outbreak of poliomyelitis. Sporadic cases of cerebro-spinal fever have been reported, but though the total is higher than last year there has been nothing in the nature of an epidemic. The incidence of plague has remained low, while all attempts to isolate yellow fever virus have so far failed, though several oterh interesting viruses have been discovered by the team from the Rockefeller Foundation in the course of their investigations. These will be examined when the staff is increased in 1939. No cases of smallpox have been reported but vaccination has been continued in all districts, special attention being paid to school children. Trial was given to the special method of semi-intradermal vaccination recommended in the British Medical Journal of the 22nd May, 1937, pp. 1066–1068. It was found that with its use there were practically no instances of sore arms and that satisfactory vaccination marks were obtained. Instructions for the general adoption of the method throughout the Protectorate have been issued.

26. *Administrative Organisation.*—In anticipation of the introduction of the general decentralisation of control to provincial staffs which is to come into force on the 1st of January, 1939, arrangements have been made for handing over executive responsibility for provincial matters to the senior medical officers in charge of provinces from that date. Henceforward the Headquarters of the department will formulate the general medical policy for the country, leaving its detailed working out in each province to the senior medical officer, subject of course to supervisory control by the central organisation.

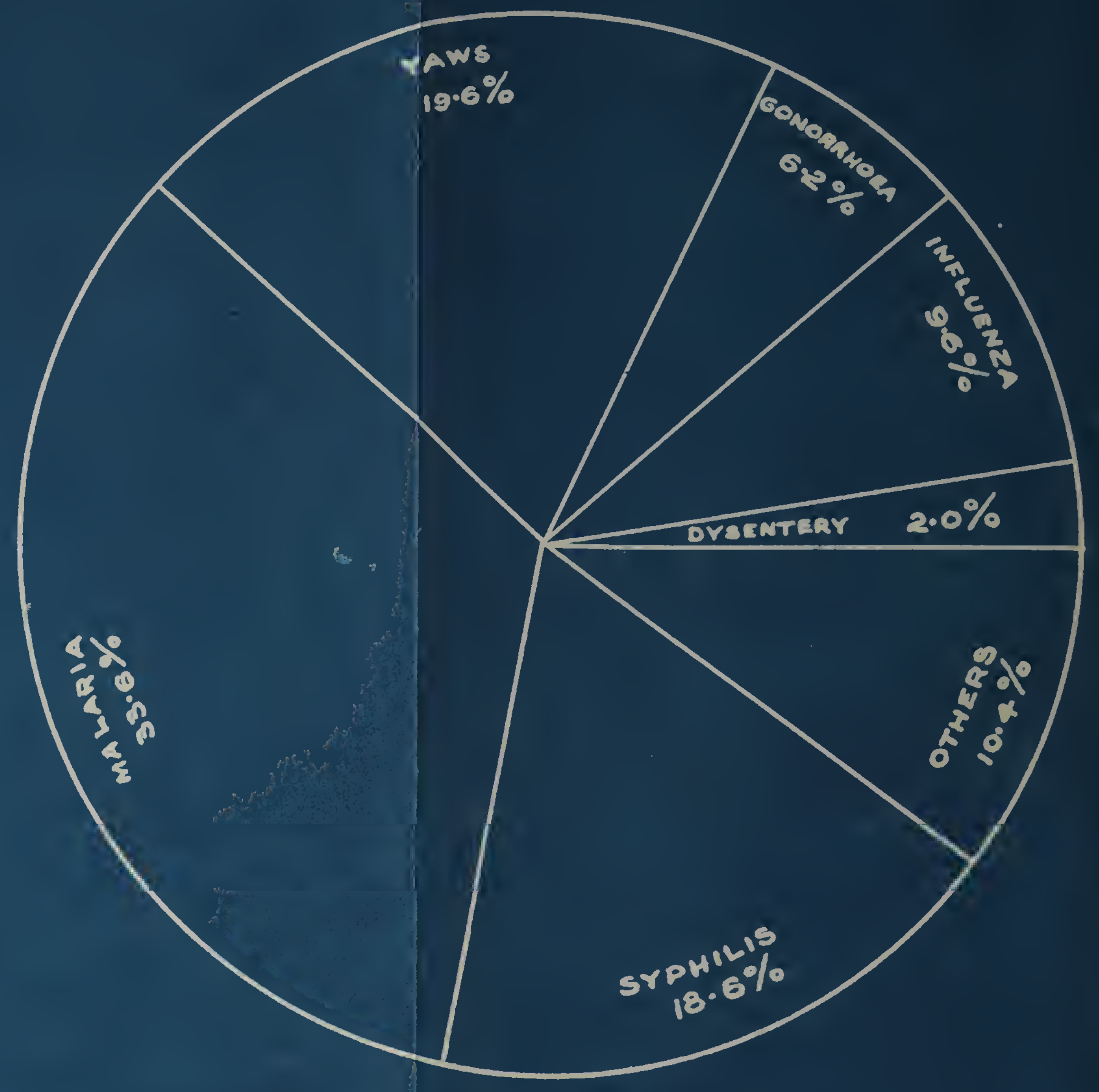
27. *Legislation.*—The major legislative measure enacted was the Mental Diseases Ordinance, which brought the law regarding the treatment of patients suffering from mental disease into accord with modern views. The draft Town Planning Ordinance mentioned in last year's report has not yet been proceeded with, as no solution has been found up to the present time of the problem set by the uncontrolled development of trading centres on native-owned land in Buganda. The draft Drugs and Poisons Ordinance is still under consideration, while Rules under the Public Health Ordinance to control eating houses and the sale of milk, foodstuffs, meat, ice and aerated waters have been drafted. The position of the draft Building Rules has been mentioned in an earlier paragraph.

THE PROPORTION OF EPIDEMIC, ENDEMIC, INFECTIOUS, SYSTEMIC AND OTHER DISEASES SHOWN AS PERCENTAGES OF TOTAL CASES

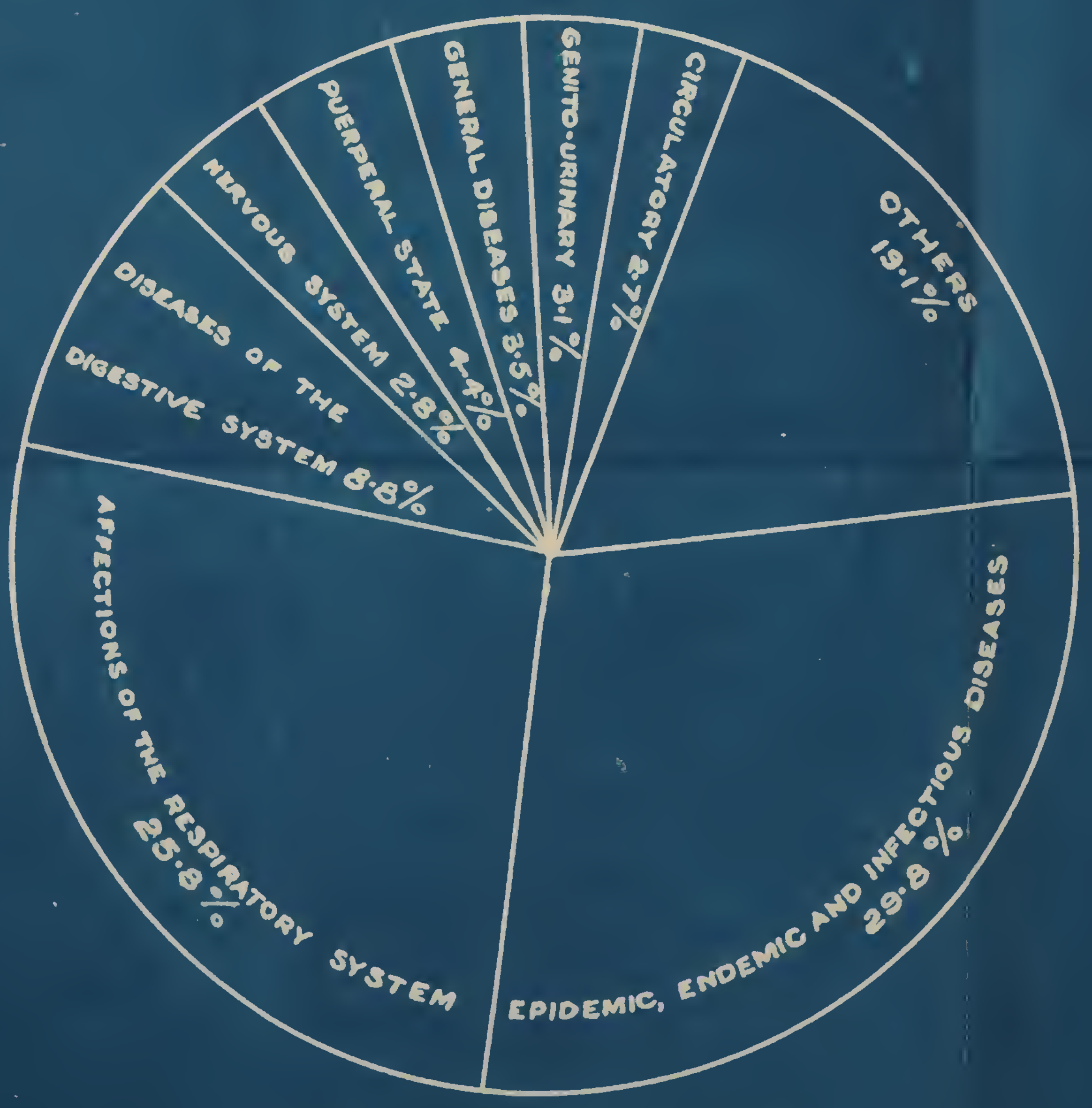
THE PROPORTION OF EPIDEMIC, ENDEMIC AND INFECTIOUS DISEASES



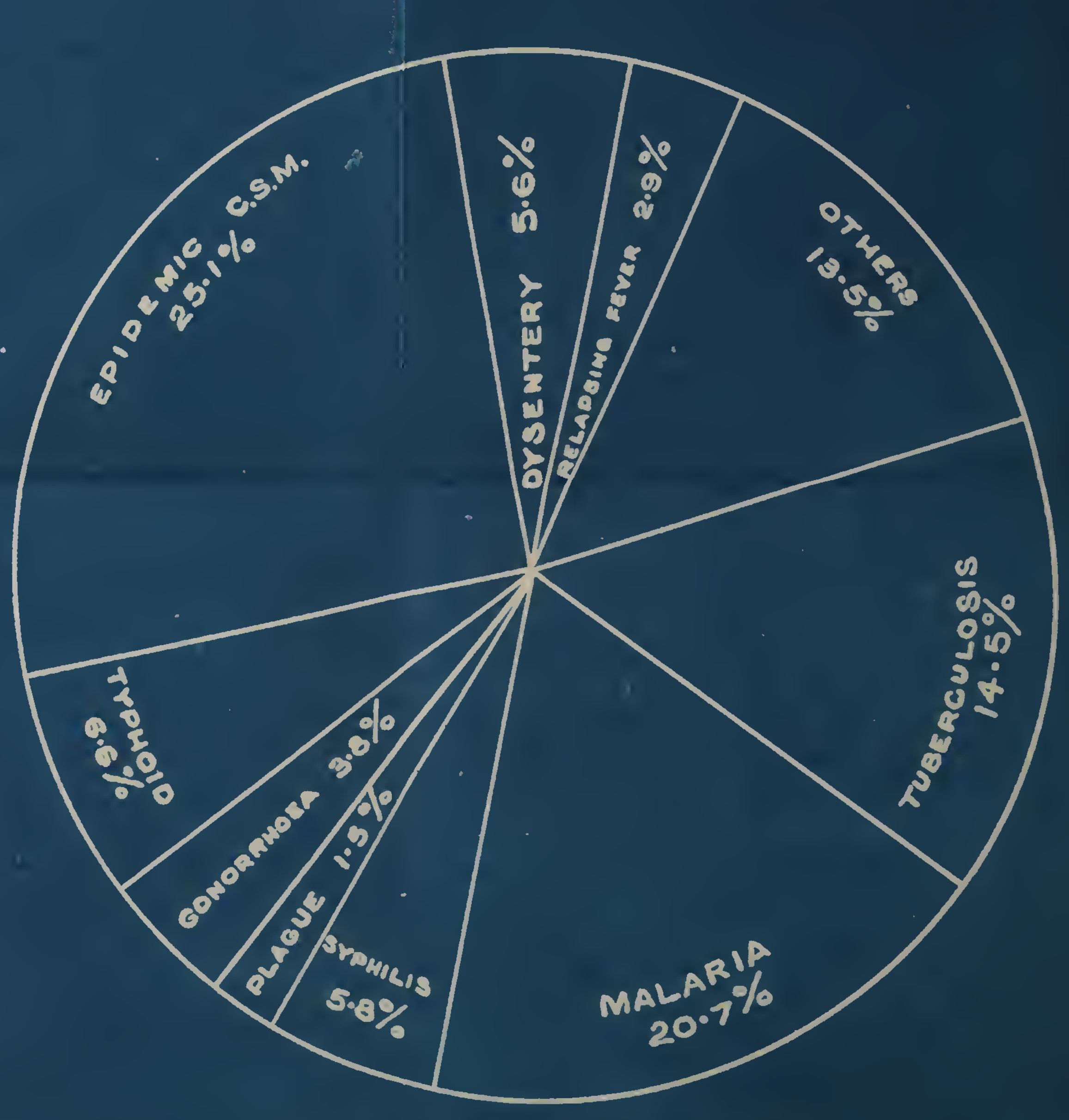
TOTAL INCIDENCE:- 386,930



TOTAL INCIDENCE:- 111,034



TOTAL DEATHS:- 1,868



TOTAL DEATHS:- 554

SECTION II.—PUBLIC HEALTH.

28. *Establishment.*—A supernumerary medical officer was included to allow Dr. Loewenthal to be set free for duties in connection with nutrition. A post of Senior Sanitary Inspector was created and the establishment of European sanitary inspectors was reduced from 15 to 14. The establishment of European nursing sisters was increased by one.

29. *Returns.*—The following table compares the attendances at hospitals and dispensaries for the last five years.

	1934	1935	1936	1937	1938
New cases (excluding examinations) ..	831,240	906,486	973,478	932,111	1,099,231
In-patients	33,200	33,805	31,077	33,443	33,590
In-patient days ..	462,802	464,673	431,601	465,315	449,045
Total attendances ..	3,209,315	3,139,985	3,094,829	2,895,933	3,375,078
Surgical operations ..	4,796	4,443	5,433	6,692	6,885

Cases by Races:—

	1937		1938	
	New cases.	Admissions.	New cases.	Admissions.
European	3,038	538	3,407	531
Asian	9,010	1,655	9,384	1,318
African	920,034	31,250	1,086,440	31,741

30. *Dispensaries.*—There were 107 dispensaries in use. In Toro, sick lines were completed at Mpondo and a new dispensary is under construction at Katwe. The dispensary at Gere-Gere in Chua was closed and a new one built at Pajule. New sick lines and staff quarters were added to Kiriandongo in Bunyoro. The dispensary at Pakwach in the West Nile District is being rebuilt. Permanent buildings have been completed at Nsinzi in Busoga, at Katakwe in Teso, at Kalungu and Kalisizo in Masaka, and at Kibale and Mityana in Mubende and are nearing completion at Bukuli in Busoga, at Madudu and Kakumiro in Mubende and at Wakiso in Mengo District. Subsidiary dressing posts have been attached to a number of dispensaries and have been well attended.

31. *Hospitals.*—Minor improvements were carried out at most station hospitals. At Fort Portal, the kitchen was enlarged and adapted for external firing. At Masindi, back to back rooms were converted into quarters for senior attendants. In Jinja a new male ward and a female general and maternity ward for Africans and a maternity ward for Asians were erected and will be ready for occupation as soon as the septic tank system is complete. Staff quarters, including recreation rooms, have also been built. In Mbale the wards have been renovated and new staff

quarters provided. The Mbale hospital has now a water-borne sewerage system. A new maternity centre was almost finished in Entebbe and will be opened early in 1939. Staff quarters have also been built and the hospital provided with a septic tank installation. The new hospital at Tororo was taken over by the department in April.

32. The number of cases seen at station hospitals and dispensaries was as follows:—

	1937		1938	
	New cases including examinations.	Re-attendances.	New cases including examinations.	Re-attendances.
Hospitals	499,934	533,727	477,793	892,368
Dispensaries	588,727	1,152,941	712,301	1,292,616
TOTAL	1,088,631	1,688,668	1,190,094	2,184,984
Total attendances ..	2,775,299		3,375,078	

Only the diseases treated in station hospitals and at dispensaries in charge of a Senior African Medical Assistant are included in Tables V and VI (*see* Appendices). These tables have been expanded to show the distribution of diseases according to sex.

33. The following were the principal causes of deaths in hospital:—

	1934	1935	1936	1937	1938
Total admissions	33,116	33,805	31,077	33,443	33,590
Total deaths	1,550	1,724	1,833	1,799	1,868
Pneumonia	356	346	320	369	461
Accidents	145	173	162	148	170
Plague	29	41	34	9	8
Syphilis	55	43	60	41	32
Dysentery	28	48	49	58	31
Malaria	107	116	142	134	115
Tuberculosis	89	62	94	112	88
Cerebro-spinal meningitis ..	43	76	114	115	139
Cancer	17	26	30	16	16
Child-birth	67	78	74	75	86
Death-rate in hospitals ..	4·68%	5·09%	5·89%	5·37%	5·56%

34. There was a slight increase in the number of in-patients which was 33,590 compared with 33,404 in 1937. The tendency for more serious cases to be treated in hospital continues, as indicated by the increased number of deaths from pneumonia and by the rising death rate.

I. General Diseases.

35. *Epidemic, endemic and infectious diseases.*—The incidence in this group was 111,034 and there were 554 deaths in hospital. Malaria accounted for 37,291 cases. There were 20,572 cases of syphilis and 21,856 of yaws.

36. *General diseases.*—25,927 cases were reported. Rheumatic conditions accounted for 22,559 of these but as mentioned in previous reports a number of other indefinite diseases are probably included. There were 109 cases of cancer compared with 108 in 1937.

37. *Affections of the nervous system and organs of sense.*—There were 32,117 cases. Trachoma was responsible for 3,560 cases an increase of 1,157 compared with 1937.

38. *Affections of the circulatory system.*—There were 2,900 cases in this group. 744 patients suffered from heart disease and 154 were treated in hospital with 39 deaths.

39. *Affections of the respiratory system.*—There were 37,673 cases compared with 26,334 in 1937, an increase of 11,339. The pneumonias continue to show an increase, being 2,526 with 461 deaths compared with 2,038 with 369 deaths last year. The results obtained in a series of cases treated with "M and B 693" were encouraging.

40. *Diseases of the digestive system.*—41,049 cases were recorded.

41. *Diseases of the genito-urinary system.*—There were 3,341 cases of non-venereal diseases of the genito-urinary system.

42. *Puerperal state and diseases of infancy.*—These are dealt with in Section V at page 43.

43. *Affections of the skin, cellular tissue, and the organs of locomotion.*—A large proportion of the 55,732 conditions included in this group are cases of tropical ulcer.

44. *Affections produced by external causes.*—52,475 cases were reported in this group and range from slight injuries to fatal accidents.

II. Communicable Diseases.

(*a*) INSECT-BORNE.

45. *Trypanosomiasis.*—The following table shows the incidence of this disease with the number of deaths for the past ten years:—

Year.	Reported deaths.	New cases.
1929	78	3,349
1930	51	727
1931	117	513
1932	85	536
1933	109	693
1934	127	773
1935	72	675
1936	58	1,927
1937	14	728
1938	5	684

The distribution of cases for the last five years has been:—

	1934	1935	1936	1937	1938
West Nile	615	568	1,867	700	656
Gulu	22	16	7	2	4
Madi	21	13	24	7	..
Chua	24	14	2	9	23
Lake Edward–George Area	81	64	27	4	..
Kigezi	1	..	..	..	..
Lake Victoria Area	..	..	..	..	..
Source of infection uncertain	10	9	..	2	1

Three deaths were reported from the West Nile District and two from Acholi District.

West Nile Sleeping Sickness Area.

There were 656 cases reported, a small decrease on the figures for 1937. Intensive inspections continue and it is considered that a large majority of infected persons are now detected.

46. *Relapsing Fever.*—493 cases, of which 389 were microscopically diagnosed, were reported. 270 were treated in hospital with 16 deaths.

	1935	1936	1937	1938
Fort Portal and dispensaries	40	51	42	29
Kabale and dispensaries	65	40	29	45
Mbarara and dispensaries	353	238	222	252
Masaka and dispensaries	131	108	109	112

Cases were also treated at Mulago (14), Mubende (6), Entebbe (4), Kampala (1), Masindi (1), Butiaba (5) and Jinja (6).

47. *Plague.*—385 cases with 376 deaths were reported, compared with 515 cases with 478 deaths in 1937. These occurred in the Mengo and Masaka Districts of Buganda Province, in the Busoga, Budama, Central and Teso Districts of the Eastern Province, and in the Lango District of the Northern Province. The mortality rate in Busoga continues to rise, being 92·06 per cent. compared with 89·62 per cent. in 1937 and 86 per cent. in 1936 but is still lower than that for the remainder of the Protectorate which is 98·75 per cent.

Cases were distributed as follows:—

	1937		1938	
	Cases.	Deaths.	Cases.	Deaths.
Buganda Province:—				
Mengo	112	108	153	153
Masaka	..	..	1	1
Eastern Province:—				
Busoga	318	285	63	58
Central District	6	6	2	2
Budama	8	8	2	2
Teso	39	39	148	144
Northern Province:—				
Lango	31	31	16	16
Western Province—				
Ankole	1	1	..	..

In the last 20 years there have been 33,350 deaths from plague as follows:—

Year.	Deaths.	Year.	Deaths.	Year.	Deaths.	Year.	Deaths.
1919 ..	1,022	1924 ..	810	1929 ..	5,118	1934 ..	937
1920 ..	1,732	1925 ..	869	1930 ..	2,370	1935 ..	1,871
1921 ..	5,871	1926 ..	1,589	1931 ..	2,299	1936 ..	929
1922 ..	1,305	1927 ..	1,863	1932 ..	990	1937 ..	478
1923 ..	914	1928 ..	1,174	1933 ..	833	1938 ..	376

48. *Typhus.*—One case was reported from Soroti and one from Kampala. The use of Carnie's disinfestor continued throughout the year in Kigezi and it is satisfactory to report that no cases were recorded from this district.

49. *Malaria.*—There was an increase in the number of cases, 78,240, with 115 deaths in hospital, being treated. The number of cases reported has been increasing for some years.

	Cases.	Deaths in Hospital.
1934	60,229	107
1935	62,581	116
1936	71,407	142
1937	72,238	134
1938	78,240	115

37,291 cases attended station hospitals and 40,949 at dispensaries. The following table compares the incidence of malaria in stations where it is particularly prevalent:—

	1936		1937		1938	
	Diagnosed by microscope.	Total cases reported.	Diagnosed by microscope.	Total cases reported.	Diagnosed by microscope.	Total cases reported.
Kampala ..	1,805	5,909	1,309	5,566	1,634	5,480
Entebbe ..	563	1,540	338	1,555	377	1,738
Masaka ..	1,228	2,384	1,332	2,791	571	1,396
Mbarara ..	1,576	4,740	947	2,394	852	1,977
Jinja	2,323	4,483	1,232	2,283	1,316	2,753
Tororo	1,152	2,070	501	1,811	528	1,807
Soroti	500	1,827	616	2,638	847	2,665
Lira	436	907	469	1,067	697	1,335
Gulu	351	842	229	529	462	984
Masindi ..	303	950	572	880	808	1,184
Arua	603	1,053	728	1,154	937	1,662

The distribution by Provinces for the last three years has been as follows:—

	Buganda.		Eastern Province.		Western Province.		Northern Province.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
1936 ..	21,982	72	27,980	40	11,319	13	10,126	17
1937 ..	21,951	74	29,053	28	12,127	18	9,925	14
1938 ..	23,785	37	33,423	41	10,349	21	10,683	16

The number of admissions to hospital was 3,724 compared with 4,184 in 1937 and the deaths fell from 134 to 115.

The following table gives the death rates for the past five years:—

	Number of in-patients.	Number of deaths.	Death-rate per cent.
1934	3,986	106	2·67
1935	3,910	116	2·96
1936	4,587	142	3·09
1937	4,184	134	3·20
1938	3,724	115	3·08

The following table shows the number of cases of malaria reported, compared with all diseases in each Province, and the number of cases per thousand of the population:—

	1935	1936	1937	1938
BUGANDA PROVINCE:—				
Cases of malaria	19,200	21,982	21,133	23,785
Rate per 1,000 cases all diseases ..	99	105	98	95
Rate per 1,000 population ..	21	24	23	26
*EASTERN PROVINCE:—				
Cases of malaria	24,108	27,980	28,947	33,423
Rate per 1,000 cases all diseases ..	78	83	93	100
Rate per 1,000 population ..	20	24	24	27
WESTERN PROVINCE:—				
Cases of malaria	9,900	11,319	12,127	10,349
Rate per 1,000 cases all diseases ..	66	75	80	64
Rate per 1,000 population ..	13	15	16	13
NORTHERN PROVINCE:—				
Cases of malaria	9,225	10,126	9,925	10,683
Rate per 1,000 cases all diseases ..	37	42	40	30
Rate per 1,000 population ..	11	12	12	13
*TOTALS FOR PROTECTORATE:—				
Cases of malaria	62,433	71,407	72,238	78,240
Rate per 1,000 cases all diseases ..	69	72	77	71
Rate per 1,000 population ..	17·4	19·8	20·0	21·1

* The population of Karamoja has been excluded from these figures.

50. *Blackwater Fever.*—163 cases with 34 deaths were reported. Of these 85 with 22 deaths were treated by Government medical officers, and 78 with 15 deaths by private practitioners. The cases by race and sex were:—

	Males.		Females.	
	Cases.	Deaths.	Cases.	Deaths.
Europeans	4	..	1	..
Asians	118	23	26	8
Africans	9	2	5	1
TOTAL	131	25	32	9

In 1937, out of 170 cases, 14 were European, 150 Asian and six African.

The number of cases, deaths and case mortality for the last 20 years (Africans excluded) has been:—

Year.	Cases.	Deaths.	Case Mortality.	Year.	Cases.	Deaths.	Case Mortality.
1919 ..	83	13	21·7	1929 ..	109	16	14·6
1920 ..	56	7	12·5	1930 ..	140	35	25·0
1921 ..	62	15	24·1	1931 ..	155	43	27·7
1922 ..	83	14	16·8	1932 ..	120	39	32·5
1923 ..	71	17	24·0	1933 ..	143	41	28·6
1924 ..	70	23	32·8	1934 ..	135	36	26·6
1925 ..	81	22	27·1	1935 ..	152	41	27·1
1926 ..	170	50	29·0	1936 ..	149	28	18·8
1927 ..	106	28	26·4	1937 ..	164	42	25·6
1928 ..	166	40	24·1	1938 ..	149	34	22·8

The number of cases reported is lower than in 1937 and the case mortality has also decreased to 22·8 per cent. The incidence of blackwater fever amongst the European population was 2·3 per thousand and amongst the Asian 8·3. The case rate amongst Europeans continues to decline and is the lowest yet recorded in these reports while that for Asians, although considerably higher, is the lowest since 1929. It still appears that the higher standard of housing and nutrition, which prevails amongst Europeans, contributes to the different rate of incidence in the two communities.

The incidence by provinces and stations (Africans excluded) for the last six years has been as follows:—

	1933	1934	1935	1936		1937		1938	
				Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
BUGANDA PROVINCE:—									
Mengo district ..	52	46	46	43	11	53	14	43	8
Masaka district ..	4	..	8	12	1	5	1	3	..
Mubende district ..	..	1	..	..	..	1	1	1	..
TOTAL ..	56	47	54	55	12	59	16	47	8
EASTERN PROVINCE:—									
Busoga district ..	28	37	29	29	4	38	8	44	11
Budama district ..	15	4	16	13	4	6	2	7	2
Central district ..	14	26	20	25	1	19	9	8	2
Teso district ..	13	8	11	11	1	18	3	23	5
TOTAL ..	70	75	76	78	10	81	22	82	20
NORTHERN PROVINCE:—									
West Nile district ..	1	..	2	1	..	3	2	5	3
Bunyoro district ..	4	3	7	3	..	6	1	6	2
Acholi district ..	2	4	4	5	3	4	1	2	..
Lango district ..	8	4	9	5	2	9	..	6	1
TOTAL ..	15	11	22	14	5	22	4	19	6
WESTERN PROVINCE:—									
Ankole district ..	..	..	..	1	..	2	..	..	..
Kigezi district ..	..	2	..	1	1	..	..	..	..
Toro district ..	2	..	..	..	..	..	..	1	..
TOTAL ..	2	2	..	2	1	2	..	1	..

The following table gives the incidence in the combined European and Asian populations of each province:—

	1934		1935		1936		1937		1938	
	Population European and Asian.	Incidence per 1,000 population.	Population European and Asian.	Incidence per 1,000 population.	Population European and Asian.	Incidence per 1,000 population.	Population European and Asian.	Incidence per 1,000 population.	Population European and Asian.	Incidence per 1,000 population.
Buganda Province ..	7,451	6·3	8,142	6·6	8,199	6·7	8,633	6·8	8,648	5·4
Eastern Province ..	6,175	12·1	6,255	12·1	5,900	13·0	6,292	12·8	7,552	10·8
Northern Province ..	1,555	7·0	1,574	14·6	1,658	8·4	1,788	12·3	1,838	10·3
Western Province ..	877	2·2	1,050	..	1,107	1·8	1,194	1·7	1,332	0·7

The case incidence in age groups was:—

Age.	Cases.	Deaths.
0— 5	16	4
6—10	8	1
11—15	3	1
16—20	16	5
21—30	63	13
31—40	27	6
41—50	12	1
55	1	1
Unknown	3	2

In one fatal case it was the third attack.

Case Incidence, Mortality and Fatality Rates.

	1933	1934	1935	1936	1937	1938
Yearly average population—						
European	1,811	1,854	1,959	1,994	2,099	2,111
Asian	14,061	14,204	15,086	14,860	15,713	17,256
Total	15,872	16,058	17,045	16,854	17,812	19,367
Cases of blackwater fever—						
European	7	12	13	8	14	5
Asian	136	123	139	141	150	144
Total	143	135	152	149	164	149
Case incidence per 1,000 population—						
European	3·86	6·47	6·63	4·01	6·6	2·3
Asian	9·67	8·65	9·21	9·49	10·0	8·3
Total	9·01	8·40	8·91	8·84	9·02	7·7
Mortality rate per 1,000 population—						
European	0·55	2·15	..	1·00	1·90	..
Asian	2·84	2·25	2·71	1·75	2·41	1·8
Total	2·58	2·24	2·40	1·66	2·35	1·6
Percentage case fatality rate—						
European	14·28	33·33	..	25·00	28·57	..
Asian	29·41	26·01	29·49	18·44	25·33	21·53
Total	28·67	26·66	26·97	18·82	25·60	20·80

Amongst Africans, there were 14 cases of blackwater fever. Five of these occurred in females, one of whom died. The cases were as follows:—

Place.	Sex.	Tribe.	Age.	Result.
Hoima	F	Munyoro	4	Cured.
Moroto	M	Muganda	31	Cured.
Soroti	M	Mutoro	32	Cured.
Soroti	F	Muganda	2	Died.
Jinja	F	Muganda	22	Cured.
Tororo	M	Mudama	26	Cured.
Kampala	M	Rwanda	15	Cured.
Kampala	M	Munyankole ..	30	Cured.
Kampala	M	Muganda	25	Cured.
Bombo	F	Muganda	27	Cured.
Entebbe	M	Muganda	30	Died.
Fort Portal	M	Mutoro	19	Died.
Kampala	M	Kikuyu	26	Cured.
Hoima	F	Munyoro	28	Cured.

Seven of these cases, one of which died, contracted the disease in their own tribal area.

(*b*) INFECTIOUS DISEASES.

51. *Cerebro-spinal fever.*—There were 358 cases with 167 deaths compared with 310 cases with 118 deaths in 1937.

The distribution was as follows:—

	Cases.	Deaths.
BUGANDA PROVINCE:—		
Mengo	83	22
Masaka	23	12
EASEERN PROVINCE:—		
Busoga	69	37
Budama	2	1
Central district	4	3
Teso	73	39
NORTHERN PROVINCE:—		
Lango	1	..
West Nile	53	22
Bunyoro	15	8
WESTERN PROVINCE:—		
Ankole	13	8
Toro	18	13
Kigezi	4	2
TOTAL	358	167

52. *Dysentery.*—2,116 cases were reported. There were 630 cases of amoebic dysentery, 349 bacillary and 1,137 unclassified.

53. *Influenza.*—28,514 cases were reported, 10,770 from hospitals and 17,744 from dispensaries. Epidemics were reported from Kabale, Toro, Masindi, Kitgum, Gulu, Lira, Busoga, Mbale and Mubende.

54. *Small-pox.*—No small-pox was notified.

55. *Syphilis and Yaws.*—There was a decrease in the cases of syphilis and an increase in the cases of yaws treated.

	1933	1934	1935	1936	1937	1938
Syphilis ..	72,218	74,141	72,361	63,695	67,621	56,545
Yaws	49,546	57,056	64,715	62,240	65,358	73,489
Both diseases ..	121,764	131,197	137,076	125,935	132,979	130,034

It is interesting to note the increase in the numbers of cases of yaws as compared to those of syphilis. This is probably due to many conditions previously considered to be syphilis now being diagnosed as yaws.

The distribution between provinces was:—

	Syphilis.	Yaws.
BUGANDA PROVINCE—		
Hospital cases	11,058	969
Dispensary cases	17,302	2,467
TOTAL	28,360	3,436
EASTERN PROVINCE—		
Hospital cases	6,026	3,559
Dispensary cases	8,587	5,704
TOTAL	14,613	9,263
NORTHERN PROVINCE—		
Hospital cases	1,504	12,306
Dispensary cases	1,997	15,143
TOTAL	3,501	27,449
WESTERN PROVINCE—		
Hospital cases	1,988	5,022
Dispensary cases	8,083	28,319
TOTAL	10,071	33,341

56. *Gonorrhoea.*—The number of cases of gonorrhoea, 14,763, shows a decrease. The incidence for the past five years is:—

1934.	*1935.*	*1936.*	*1937.*	*1938.*
9,690	11,849	14,101	16,236	14,763

The results of treatment remain unsatisfactory owing to irregular attendance of the patients, but encouraging results were obtained at the end of the year by the exhibition of "Uleron" and "M and B 693".

57. *Leprosy.*—At Government hospitals and dispensaries 1,702 lepers attended for treatment, compared with 1,067 in 1937.

REPORTS ON MISSION LEPER COLONIES.

All leper colonies were visited by Dr. Muir, Medical Secretary of the British Empire Leprosy Relief Association.

Buluba Leper Settlement, Busoga.—This settlement, under the supervision of the Franciscan sisters, has continued to make satisfactory progress. The further clearing foreshadowed in the 1937 report has been carried out and more land has been put under cultivation. As this is still insufficient for the needs of the community it is hoped that clearing will continue during 1939. The maternity and ward block mentioned in last year's report was finished and a refectory for boys is nearing completion. The lepers appear as happy and contented as their condition allows and the majority of the young people are making satisfactory progress. There were resident 83 males, 37 females and 41 children as well as eight infants who showed no signs of disease, six non-leper children, three uninfected women and four men who were free from leprosy.

Nyenga Leper Colony, Mengo.—This colony is under the management of the Franciscan Sisters. There were resident 205 lepers including 19 children. There were twelve deaths and four births. The newly born babies were transferred to Nsube orphanage. This settlement is for advanced cases but three cases have shown such marked improvement that it is hoped that they will be discharged during 1939. One brick house for a married couple was completed and a dormitory is in the course of construction.

Bunyoni Leper Colony, Kigezi.—The colony is maintained by the Church Missionary Society. As a result of Dr. Muir's visit several changes were made, including the segregation of the highly infectious cases who now have their own dispensary and school. Children have been moved to another part of the island. Changes have also been made in routine treatment. There has been considerable improvement in the general health of the inhabitants which is considered to be due to the changes described above, together with improved housing and diet. Prejudices are being overcome and, although this is contrary to custom, most of the patients are now eating fish of which a plentiful supply exists in Lake Bunyonyi. Milk and meat are also included in the ration. Occupational therapy has also been instituted, and cases in which this form of treatment is indicated, are given suitable tasks to perform. Twenty children have been discharged from the home for untainted children to the care of healthy relatives. Twelve houses similar to those referred to in last year's report were completed. There were 485 residents at the end of 1938, a reduction on the figure for 1937.

Teso Settlements.—These settlements are under the supervision of the Church Missionary Society. The number of children in residence at the *Kumi Children's Home* was 456. Of these 138 responded well to treatment, 109 showed slight improvement, 76 remained stationary and nine became worse. Of the remainder 42 were discharged symptom free after two years supervision, 16 left before the disease was arrested, 26 were transferred to Ongino on reaching the age of 16, and nine died. There were also 31 untainted children in residence and the home to accommodate them is nearing completion. The children continue to take a keen interest in the activities of the boy scouts and girl guides. The numbers resident in *Ongino Leper Colony* were 252 males and 180 females. Of these 159 were much improved, 144 slightly improved, 66 were stationary and 29 became worse. 16 non-infectious cases were discharged, 20 left before the disease was arrested and nine died. The general condition of many patients shows improvement, they appear cleaner and better nourished and take a greater interest in their appearance. A club room has been opened and is very popular. Efforts were made to improve the water supply but although boring was undertaken, this proved unsuccessful.

58. *Typhoid Fever.*—138 cases, seven of which were due to paratyphoid bacilli, were treated by Government medical officers. There were 35 deaths in hospital. There were 13 cases in the European and Asian residential areas of Kampala and 45 reported from its immediate environs. The cases in Kampala were sporadic and were not considered to arise from water or milk supplies. 46 cases were reported from Kigezi and 16 from Lira.

59. *Tuberculosis.*—461 cases of pulmonary disease and 100 of other forms of tuberculosis attended Government hospitals. Mulago hospital with 126 cases and Masaka hospital with 110 again provided the largest numbers of patients. 228 cases of pulmonary tuberculosis, 60 of whom died, and 64 cases of other tuberculous diseases, 18 of whom died, were admitted to hospital.

60. *Anthrax and Rabies.*—Eight cases of anthrax were diagnosed in Kigezi. No rabies was reported.

61. *Measles.*—925 cases were recorded by station hospitals compared with 866 in 1937. There were epidemics in a number of districts, and the disease appears to have been severe in Gulu.

(*c*) HELMINTHIC DISEASES.

62. The number of cases of infection with intestinal parasites recorded in the returns includes only those patients whose symptoms are diagnosed as due to such parasites. Many other infections are discovered by the routine examination of stools of in-patients but are not separately reported, though treatment is given when advisable.

63. *Ancylostomiasis.*—2,036 cases were recorded. The following results of examinations of stools were submitted by medical officers:—

Entebbe	80	per cent. contained ova.
Mubende	39	per cent. contained ova.
Masaka	77	per cent. contained ova.
Mbale	45	per cent. contained ova.
Jinja	27	per cent. contained ova.
Fort Portal	32	per cent. contained ova.
Gulu	26	per cent. contoined ova.
Arua	48	per cent. contained ova.
Lira	10	per cent. contained ova.

Although the infection appears to be wide-spread, as a rule medical officers report that it causes little disability.

64. *Schistosomiasis.*—247 cases were reported.

65. *Filariasis.*—*Onchocerca volvulus*, to which reference was made in last year's report, has now been recorded in Toro and in Kigezi.

TABLE A.—RETURN SHOWING BIRTH, DEATH, STILL-BIRTH AND INFANTILE MORTALITY RATES FOR THE UGANDA PROTECTORATE FOR THE LAST SEVEN YEARS.

PROVINCE AND DISTRICT.	BIRTH RATE PER 1,000 POPULATION.							DEATH RATE PER 1,000 POPULATION.						
	1932	1933	1934	1935	1936	1937	1938	1932	1933	1934	1935	1936	1937	1938
BUGANDA :—														
* Mengo	16·61	17·05	17·49	19·74	19·83	19·71	20·06	22·15	22·44	19·34	21·61	20·56	19·37	17·92
* Entebbe	17·84	18·12	18·93	19·06	20·34	20·32	21·19	14·59	15 07	13·29	13 36	16·10	14·95	13·21
Masaka	25·20	29·79	29·92	28·84	33·30	32·27	32·93	17·42	16·64	16·78	16·38	17·62	17·89	16·38
Mubende	20·18	19·36	19·16	20·99	22·02	20·17	21·54	17·99	16·49	19·33	19·12	19·39	18·85	16·83
TOTAL	19·25	20·23	20·67	21·71	23·17	22·60	23·32	18·84	18·62	17·51	18·29	18·77	18·02	16·38
EASTERN :—														
Busoga	31·38	31·66	27·49	26·45	23·80	22·23	21·75	22 68	20·82	23 53	24·36	26·37	26·98	21·57
Budama	33·86	36·25	28·70	31·42	32·97	31·22	27·84	16·95	21·39	22·58	24·57	24·93	21·82	17·27
‡ Bugishu	37·82	45·45	30·55	33·52	38·13	34·05	31·32	20·10	24·87	23·25	21·53	26·07	20·72	16·00
‡ Bugwere	29·43	31·96	29·62	28·00	30·45	28·13	27·08	18·82	20·34	28·04	37·27	32·14	24·23	18·73
Teso	23·90	21·93	18·93	16·36	16·30	17·79	21·59	15·53	15·51	18·75	18·31	17·90	14·48	13·73
TOTAL	30·66	32·20	26·47	26·13	26·58	25·21	24·90	19·27	20·22	22·94	24·48	25·05	21·99	17·85
WESTERN :—														
Toro	21·12	20·92	22·58	19·98	21·37	20·09	23·52	17·30	16·00	16·76	16·73	20·28	17·88	17·49
Ankole	24·84	21·39	23·17	21·75	26·81	24·07	26·37	19 31	17·25	20·14	20·01	13·98	15·87	15·74
Kigezi	37·37	36·07	33·11	32·97	33·33	31·77	39·84	15·20	12·05	15·81	18·87	12·72	14·92	13·03
TOTAL	27·92	26·13	26·33	25·05	27·56	25·64	30·29	17·41	15·18	17·77	18·73	15·24	16·08	15·26
NORTHERN :—														
Lango	38·22	37·27	33·63	37·06	35·63	34·04	33·96	20·66	20·99	28·43	30·06	22·18	22·93	22·14
Bunyoro	19·17	20·38	16·90	17·57	18·96	15·84	15·33	21·33	20·59	18·47	14·56	14·32	14·43	10·10
§ Gulu	44·90	51·31	50·90	53·71	46·27	45·38	47 19	24·33	26·79	40·56	23·68	24·86	25·49	33·60
§ Chua	52·57	46 75	46·26	50·44	25·76	38·16	38·10	30·90	24·35	27·60	22·38	11·87	22·74	34·56
West Nile	28·41	25·54	22·66	23·12	20·66	18·69	24·68	11·42	10·00	11·88	9·11	10·27	10·90	12·67
TOTAL	34·58	33·83	31·25	33·40	28·73	28·48	29·76	19·32	18·49	23·10	19·31	16·41	18·16	20·29
UGANDA PROTECTORATE	28·11	28·39	26·05	26·43	26·42	25·38	26·70	18·30	18·43	20·58	20·66	19·60	18·95	17·50

PROVINCE AND DISTRICT.	STILL-BIRTH RATE PER 100 BIRTHS AND STILL-BIRTHS.							INFANTILE MORTALITY RATE PER 1,000 BIRTHS.						
	1932	1933	1934	1935	1936	1937	1938	1932	1933	1934	1935	1936	1937	1938
BUGANDA :—														
* Mengo	5·34	4·52	3·10	4·22	3·21	3·09	3·09	107·54	124·80	93·29	83·98	91·73	89·96	76·41
* Entebbe	1·77	1·52	0·58	1·18	1·33	1·05	0·90	85·36	87·96	72·13	62·33	74·03	60·50	59·28
Masaka	5·39	3·07	4·04	4·48	6·09	4·48	3·52	89 54	96·10	83·03	76·96	76·73	61·16	58 46
Mubende	8·93	6·44	7·19	7·75	5·09	4·30	4·97	113·97	103·87	122·66	120·00	120·87	114·41	87·72
TOTAL	5·37	3·87	3·61	4·37	4·07	3·34	3·12	99·60	105·59	90·92	84·16	88·76	79·36	69·45
EASTERN :—														
Busoga	7·97	7·59	7·78	7·65	8·27	7·62	6·10	206·04	202·66	229 65	227·75	276·66	248·04	211·04
Budama	1·83	1·18	0·69	0·63	0·58	1 05	3·59	145·24	123·03	142·43	147·47	174·41	145·62	125·90
‡ Bugishu	5·76	5·32	5·20	5·05	5·03	5·40	5·47	172 86	196 68	272·87	207·00	217·66	200·36	144·04
‡ Bugwere	5·28	5·66	5·70	6·29	5 28	5·08	4·42	134·84	142·58	155·52	188·65	157·92	149·54	106·02
Teso	0·30	0·17	0·32	0·31	0·18	0·14	0·31	87·81	93·77	102·83	97·81	92·28	56·38	53·94
TOTAL	4·96	4·76	4·81	4·82	4·71	4·50	3·75	158·96	163·33	191·54	185·77	199·87	173·07	135·93
WESTERN :—														
Toro	5·58	3·81	3·83	3·28	4·01	3·61	3·28	278·54	207·66	190·40	223·29	202·47	139·59	111·03
Ankole	3·89	4·60	4·22	4·34	2·93	3·20	3·27	207·90	162·58	177·54	169·47	103·30	123·87	115·96
Kigezi	0·86	0·97	0·71	1·63	0·94	0·95	1.97	144·44	100·17	152·47	168·91	96·41	133·38	69 63
TOTAL	2·95	2·79	2·68	2·92	2·36	2·34	2·68	194·81	143 88	170·01	180·89	121·14	131·19	93·82
NORTHERN :—														
Lango	0·57	1·03	1·53	1·46	2·27	2·91	2·65	132·05	122·66	181·73	133·75	129·97	140·08	153·49
Bunyoro	18·98	16·01	14·69	11·90	10·43	10·00	7·66	172·08	167·46	136·83	105·24	93·42	107·20	62·14
§ Gulu	2·33	4·35	5·19	5·52	5 63	5·46	6·23	252·14	238 11	325·99	143·94	174·53	196·07	260·09
§ Chua	5·66	5·59	6·59	5·68	6·30	5·58	6·52	341·89	305·10	356·53	283·03	311·79	364·68	564·22
West Nile	3·56	2·26	2·64	2·68	2·31	2·82	1·61	259·10	243·55	329·84	279·61	316·23	314·10	362·28
TOTAL	4·26	4·19	4·57	4·19	4·25	4·44	4·13	223·33	206·14	271·89	191·31	197·45	219·78	277·89
UGANDA PROTECTORATE	4·46	4·09	4·08	4·19	3·97	3·79	3·46	173·19	160·64	188·53	165·88	158·64	155·67	147·18

PROVINCE AND DISTRICT.	MATERNAL MORTALITY RATE PER 1,000 BIRTHS AND STILL-BIRTHS.						
	1932	1933	1934	1935	1936	1937	1938
BUGANDA :—							
* Mengo	13·32	15·71	11·79	12·27	15·42	9·93	10·02
* Entebbe	6·22	6·41	4·76	4·95	6·92	6·91	6·82
Masaka	5·15	6·90	6·53	5·94	6·95	7·97	6·53
Mubende	8·98	6·50	5·58	5·34	5·78	7·86	5·03
TOTAL	9·23	9 75	7·81	7·95	9·60	8·43	7·52
EASTERN :—							
Busoga	13·06	13·84	13·50	13·75	16·12	18·12	18·24
Budama	11·36	10·36	11·94	12·26	9·29	7·85	10·11
‡ Bugishu	11·82	11·26	12·48	8·70	11·48	11·77	9·82
‡ Bugwere	11·79	11·51	12·75	19·72	12·25	7·94	7·64
Teso	12·39	10·46	12·47	14·47	13·22	9·62	8·85
TOTAL	12·39	11·91	12·81	13·57	12·91	12·04	11·74
WESTERN :—							
Toro	19·08	14·58	23·18	10·30	12·97	13·33	11·77
Ankole	8·40	7·74	8·47	7·91	8·58	7·64	4·01
Kigezi	4·81	5·22	9·82	5·61	5·00	5·89	3·20
TOTAL	9·15	8·12	12·51	7·43	8·06	8·12	5·25
NORTHERN :—							
Lango	8·13	8·76	8·95	9·72	9·78	9·44	9·37
Bunyoro	3 33	6·87	5·76	3·51	4·95	4·45	7·82
§ Gulu	6·17	5·71	4 19	3·00	5·31	9·11	4·99
§ Chua	22·44	17·60	21·35	16·41	17·81	17·48	16·99
West Nile	23·95	35·27	50·40	20·16	46·11	32·01	41·54
TOTAL	13·87	15·66	19·26	11·19	17·43	14·87	16·94
UGANDA PROTECTORATE	11·56	11·81	13·48	10·60	12·28	11·17	10·64

† The population of Karamoja has been excluded from the total population and from all calculations of rates because no vital statistics are submitted from that district.

* The Entebbe District was amalgamated with the Mengo District on 1st November, 1936.

‡ The Bugishu and Bugwere Districts were amalgamated into the Central District on 1st January, 1937.

§ The Gulu and Chua Districts were amalgamated into the Acholi District on 1st January, 1937.

TABLE B.—VITAL STATISTICS RETURN OF THE UGANDA PROTECTORATE FOR THE YEAR 1938 (NATIVE POPULATION ONLY).

PROVINCE AND DISTRICT.	TOTALS FOR THE WHOLE YEAR.										ESTIMATED POPULATION.	RATES FOR THE YEAR.				
	Live Births.			Still Births.	Deaths							Birth Rate per 1000 Population.	Percentage of Still Births to Births plus Still Births.	Infantile Mortality Rate per 1000 Live Births.	Maternal Mortality per 1000 Births and Still Births.	Death Rate per 1000 Population.
					Of Children under 1 Year.			Of Women in Child Birth.	All Other Deaths.	Total Deaths.						
	M.	F.	Total.		M.	F.	Total.									
BUGANDA PROVINCE:—																
Mengo { Mengo	3,675	3,379	7,054	225	274	265	539	73	5,700	6,312	352,210	20·02	3·09	76·41	10·02	17·92
Mengo { Entebbe	2,047	2,018	4,065	37	134	107	241	28	2,266	2,535	191,889	21·19	0·90	59·28	6·82	13·21
Masaka	3,220	3,126	6,346	232	193	178	371	43	2,742	3,156	192,663	32·93	3·52	58·46	6·53	16·38
Mubende	1,758	1,639	3,397	178	150	148	298	18	2,339	2,655	157,686	21·54	4·97	87·72	5·03	16·83
TOTAL	10,700	10,162	20,862	672	751	698	1,449	162	13,047	14,658	894,448	23·32	3·12	69·45	7·52	16·38
EASTERN PROVINCE:—																
Busoga	4,232	4,155	8,387	545	902	868	1,770	163	6,384	8,317	385,492	21·75	6·10	211·04	18·24	21·57
Budama	2,239	2,193	4,432	16	285	273	558	45	2,147	2,750	159,146	27·84	3·59	125·90	10·11	17·27
Central { Bugishu	3,179	2,979	6,158	357	467	420	887	64	2,195	3,146	196,577	31·32	5·49	144·04	9·82	16·00
Central { Bugwere	2,361	2,515	4,876	226	292	225	517	39	2,817	3,373	180,018	27·08	4·42	106·02	7·64	18·73
Teso	3,024	2,945	5,969	19	181	141	322	53	3,421	3,796	276,411	21·59	·31	53·94	8·85	13·73
†Karamoja	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL	15,035	14,787	29,822	1,163	2,127	1,927	4,054	364	16,964	21,382	1,197,644	24·90	3·75	135·93	11·74	17·85
WESTERN PROVINCE:—																
Toro	2,472	2.211	4,683	159	283	237	520	57	2,906	3,483	199,058	23·52	3·28	111·03	11·77	17·49
Ankole	3,897	3,821	7,718	261	489	406	895	32	3,681	4,608	292,594	26·37	3·27	115·96	4·01	15·74
Kigezi	5,245	5,152	10,397	209	387	337	724	34	2,643	3,401	260,935	39·84	1·97	69·63	3·20	13·03
TOTAL	11,614	11,184	22,798	629	1,159	980	2,139	123	9,230	11,492	752,587	30·29	2·68	93·82	5·25	15·26
NORTHERN PROVINCE:—																
Lango	4,117	3,877	7,994	218	615	612	1,227	77	3,906	5,210	235,369	33·96	2·65	153·49	9·37	22·14
Bunyoro	934	836	1,770	147	56	54	110	15	1 041	1,166	115,411	15·33	7·66	62·14	7·82	10·10
Acholi { Gulu	2,746	2,506	5,252	349	659	707	1,366	28	2,345	3,739	111,279	47·19	6·23	260·09	4·99	33·60
Acholi { Chua	1,639	1,771	3,410	238	948	976	1,924	62	1,107	3,093	89,495	38·10	6·52	564·22	16·99	34·56
West Nile	2,979	2,870	5,849	96	1,070	1,049	2,119	247	980	3,346	263,987	24·68	1·61	362·28	41·54	12·67
TOTAL	12,415	11,860	24,275	1,048	3,348	3,398	6,746	429	9,379	16,554	815,541	29·76	4·13	277·89	16·94	20·29
UGANDA PROTECTORATE	49,764	47,993	97,757	3,512	7,385	7,003	14,388	1,078	48,620	64,086	3,660,220	26·70	3·46	147·18	10·64	17·50

† The population of Karamoja has been excluded from the total population and from all calculations of rates because no vital statistics are submitted from that district.

There were 2,920 cases of other helminthic infection of which the most common were *Taenia* and *Ascaris*. The former is found most frequently in the Western Province and in the Masaka District, and the latter is common in the Western Province. Dracontiasis is confined to Acholi and the West Nile District.

B. Vital Statistics.

66. The vital statistics for the Protectorate are given in Tables A, B and C. The population has been calculated from the census figures of 1931, by the addition of births and the subtraction of deaths in each subsequent year.

67. The following table gives the yearly increase of the provincial population per 1,000 persons:—

	1934	1935	1936	1937	1938
Buganda Province	3·1	3·4	4·4	4·6	6·9
Eastern Province	3·5	1·5	1·5	3·2	7·1
Western Frovince	8·6	6·3	12·4	9·6	15·2
Northern Province	8·2	14·2	12·4	10·4	9·5

68. *Birth Rate and Death Rate.*—Live births exceeded deaths by 33,671 and the population increased by 9·3 per thousand. The corresponding figures for 1937 were 23,334 and 6·4. All districts showed an excess of live births to deaths.

69. *Still-birth Rate.*—The number of still births recorded was 3,512 compared with 3,631 in 1937. The figures are probably not accurate. The percentage of still-births to the total of live births and still-births ranges from ·90 in Entebbe to 7·66 in Bunyoro. The rate for the Protectorate was 3·46.

70. *Infant Mortality Rate.*—This rate—147·18 per thousand live births—continues to fall. It still remains high in the West Nile (362·28), Chua (564·22), Busoga (211·04), and Gulu (260·09). In Teso (53·94) the figure compares quite favourably with some European countries.

71. *Maternal Mortality Rate.*—This rate fell from 11·17 to 10·64. The figures given are probably not very reliable.

TABLE C.—TABLE SHOWING INCREASE OR DECREASE OF REPORTED BIRTHS OVER REPORTED DEATHS FOR FIVE DISTRICTS FOR THE LAST 20 YEARS.

Year.	Buganda.	Busoga.	Bunyoro.	Ankole.	Toro.	Total Increment.
1919 ..	—5,709	—3,135	—2,061	—1,870	— 176	—12,951
1920 ..	—2,204	+ 2,025	—1,012	+ 496	+ 907	+ 212
1921 ..	— 711	—1,483	— 997	+ 889	+ 1,896	— 406
1922 ..	—1,458	+ 2,953	— 891	+ 1,503	+ 1,872	+ 3,979
1923 ..	— 624	+ 2,194	— 856	+ 1,611	+ 1,670	+ 3,995
1924 ..	+ 37	+ 3,295	— 970	+ 2,329	+ 2,924	+ 7,615
1925 ..	+ 1,059	+ 5,726	— 818	+ 3,727	+ 3,253	+ 12,947
1926 ..	+ 1,179	+ 5,314	— 500	+ 2,891	+ 3,602	+ 12,486
1927 ..	+ 3,475	+ 5,703	— 443	+ 4,446	+ 3,955	+ 17,136
1928 ..	+ 1,091	+ 4,656	— 492	+ 4,848	+ 3,686	+ 13,789
1929 ..	+ 1,357	+ 5,572	— 329	+ 4,238	+ 3,505	+ 14,343
1930 ..	— 940	+ 3,799	— 801	+ 3,139	+ 1,571	+ 6,768
1931 ..	+ 213	+ 3,084	— 406	+ 2,945	+ 497	+ 6,333
1932 ..	+ 357	+ 3,322	— 246	+ 1,556	+ 743	+ 5,732
1933 ..	+ 1,474	+ 4,184	— 24	+ 1,167	+ 962	+ 7,763
1934 ..	+ 2,769	+ 1,536	— 179	+ 858	+ 1,143	+ 6,127
1935 ..	+ 3,001	+ 813	+ 343	+ 494	+ 640	+ 5,291
1936 ..	+ 3,828	— 997	+ 531	+ 3,682	+ 218	+ 7,262
1937 ..	+ 4,069	—1,830	+ 162	+ 2,373	+ 438	+ 5,212
1938 ..	+ 6,204	+ 70	+ 604	+ 3,110	+ 1,200	+ 11,188

European Officials.

72. Only those officials whose names appear in the Protectorate Staff List are shown in Table D. Wives and families are not included.

TABLE D.

73. Table showing the sick, invaliding and death rates of European officials, during the last three years:—

	1936	1937	1938
Total number of officials resident	570	595	652
Average number resident	462	499	522
Total number on sick list	746	883	928
Total number of days on sick list	2,914	2,638	2,492
Average daily number on sick list	7·98	7·23	6·83
Percentage of daily sick to average number resident ..	1·73	1·49	1·31
Average number of days on sick list each patient ..	3·91	2·99	2·68
Average sick time each resident	6·31	5·29	4·77
Total number invalided	1	1	4
Percentage of invalidings to total residents	0·18	0.17	0·61
Total deaths	..	4	2
Percentage of deaths to average number resident ..	..	0·80	0·38
Percentage of deaths to total residents	..	0·67	0·31
Number of cases of sickness contracted away from station	..	No record	..
Number granted local sick leave	30	37	43
Average number of days sick leave for each patient granted local sick leave	18·46	17·38	18·72

The principal causes of sickness were:—

Malaria, 250; Diseases of the digestive system, 60; Injuries, 37; Diseases of the respiratory system, 34; Influenza, 41.

74. Medical Boards were held on 18 European officials for the following conditions:—

Disease.	*No. of cases.*	*Result of Board.*
Nervous thrombosis	1	To be invalided out of the service.
Tropical neurasthenia	2	
Pulmonary tuberculosis	1	
Veldt sores	1	To proceed on home leave for treatment.
Paroxysmal tachycardia	1	
Haematemesis	2	
Fracture of os calsis	2	
Dementia praecox	1	
Chronic maxillary sinusitis	1	
Blackwater fever	1	To proceed on leave before completion of a full tour.
Mental disorder	1	To remain in Kampala for observation.
Schistosomiasis	1	
Nasal polypi	1	Fit for duty in the Protectorate.
Hyperpiesis	1	
Neuralgia	1	To proceed on local sick leave.

75. *Deaths.*—Two deaths were recorded, the causes being:—

Pulmonary tuberculosis	1
Accident	1

European Non-Officials.

76. 2,201 cases of illness among the European non-officials were treated by Government medical officers. The number in 1937 was 1,837.

Principal causes:—

Malaria, 384; Diseases of the digestive system, 68; Injuries, 32; Diseases of the respiratory system, 58; Influenza, 60.

77. *Deaths.*—Eleven deaths were recorded, the causes of which were:—

Pneumonia following bronchitis, 1; Accidental poisoning, 1; Chronic myocarditis, 1; Angina pectoris, 1; Cerebral malaria, 1; Septicaemia, 1; Diabetic gangrene, 1; Poliomyelitis, 1; Carcinoma of the pancreas, 1; Appendicitis, 1; Bulbar paralysis, 1.

Asian Officials.

78. In Table E, officials of the Kenya and Uganda Railways and Harbours, artizans employed by the Public Works Department on temporary agreement and the wives and families of all officials are omitted.

79. Table showing the sick, invaliding and death rates of Asian officials during the last three years:—

	1936	1937	1938
Total number of officials resident	367	387	406
Average number resident	306	323	345
Total number on sick list	542	580	543
Total number of days on sick list	1,850	1,648	1,573
Average daily number on sick list	5·07	4·02	4·31
Percentage of daily sick to average number resident ..	1·66	1·79	1·25
Average number of days on sick list for each patient ..	3·41	2·84	2·89
Average sick time each resident	6·04	5·10	4·55
Total number invalided	6	3	3
Percentage of invalidings to total residents	1·63	0·78	0·74
Total deaths	1	..	..
Percentage of deaths to total residents	0·28	..	..
Percentage of deaths to average number resident ..	0·34	..	..
Number of cases of sickness contracted away from station	..	No record	..
Number granted local sick leave	2	6	12
Average number of days on sick leave for each patient granted sick leave	19·00	20·00	21·58

The principal causes of sickness were:—

Malaria, 180; Diseases of the digestive system, 33; Injuries, 32; Diseases of the respiratory system, 29; Influenza, 95.

80. Medical Boards were held on nine Asian officials for the following conditions:—

Disease.	*No. of cases.*	*Result of Board.*
Anxiety neurosis	1	To be invalided out of the service.
Chronic bronchitis	1	
Neurasthenia	1	
Blackwater fever	1	To be sent to India for treatment.
Nervous exhaustion	2	
Trachoma	1	Fit for duty anywhere in the Protectorate.
Insomnia	1	
Malaria	1	To proceed on local sick leave.

81. *Deaths.*—Nil.

Asian Non-Officials.

82. 7,662 cases of sickness among the non-official community were treated by the Government medical staff. The number in 1937 was 8,124. The principal causes of sickness were:—

Malaria, 2,625; Diseases of the digestive system, 826; Injuries, 280; Diseases of the respiratory system, 596; Influenza, 363; Blackwater fever, 40.

83. 74 deaths were reported to this department. The causes were:—

Blackwater fever	18	Pneumonia	19
Prematurity	5	Malaria	8
Parturition	2	Acute bronchitis	2
Pernicious anaemia	1	Burns	2
Sepsis following tooth extraction	1	Toxaemia of pregnancy ...	1
		Gallstones	1
Plague	1	Portal pylephlebitis	2
Leukaemia	1	Pneumococcal peritonitis ...	1
Spina bifida	1	Angina pectoris	1
Carbuncle	1	Cerebral haemorrhage ...	1
Enteritis	2	Undefined	2
Haemoptysis	1		

African Officials (African Civil Service).

Table F.

84. Table showing the sick, invaliding, and death rate of African civil servants, excluding wives and families:—

	1936	1937	1938
Total number of officials resident	178	212	183
Average number resident	178	212	183
Total number on sick list	58	93	108
Total number of days on sick list	229	220	324
Average daily number on sick list	0·63	0·60	0·88
Percentage of daily sick to average number resident	0·35	0·28	0·48
Average number of days on sick list for each patient	3·95	2·36	3
Average sick time each resident	1·29	1·03	1·77
Total number invalided	..	..	..
Percentage of invalidings to total residents	..	..	..
Total deaths	1	1	..
Percentage of deaths to total residents	0·56	0·47	..
Percentage of deaths to average number resident	0·56	0·47	..
Number of cases of sickness contracted away from station	No record	..	No record
Number granted local sick leave	..	1	2
Average number of days on sick leave for each patient granted sick leave	..	21	28

SECTION III.—HYGIENE AND SANITATION.

A. General Review of Work Done and Progress Made.

I. Preventive Measures.

(*a*) Insect-borne Diseases.

85. *Malaria.*—The use of anti-malarial mixture and paris green as larvicides, as well as the filling of wells and depressions which are potential mosquito breeding places, continued as routine measures in most stations.

In Masindi drains were re-aligned and a number of pools were thus eliminated. At Gulu sub-soil drainage was undertaken in the Pice swamp and the planting of eucalyptus and cassia was continued, a number of breeding places being thus permanently eradicated. In Arua a considerable amount of sub-soil drainage has been undertaken. At Mbale 6·24 miles of open concrete drains and six miles of sub-soil drains are now complete and three miles of the Nakiliso and Waniago rivers have been canalized. Mosquito surveys were made at Tororo in February and November and extensions were made to the anti-malarial plantations. Sub-soil drainage was carried out at Masaka and the drainage and planting with eucalyptus of two swamps was undertaken.

At Kampala the scheme for deepening the Nakivubo river has commenced and already the large papyrus swamps on the east of the township are practically dried out. Planting of these swamps with eucalyptus will now be undertaken. Other major anti-malarial measures in Kampala have been carried out by the Kenya and Uganda Railways and by the Public Works Department.

At Jinja, in January, a number of cases of malaria occurred in the houses situated on the lake shore although the weather was dry and no standing water was seen. *A. funestus* were caught from time to time but no breeding place could be discovered in the vicinity. After a search, a pool on the Buganda side of the lake was found to be heavily infested with larvae of *A. funestus.* This was filled in and since then no adult *A. funestus* have been found in Jinja.

86. *Trypanosomiasis.*—The Victoria Nyanza area remained free of the disease, but clearings were maintained and the sleeping sickness rules enforced to prevent the disease from being introduced from other areas.

In the Lake Edward–George area no cases were reported and the position remains satisfactory in spite of the development of the fishing industry.

In Gulu six-monthly inspections were made of the newly settled areas at Anaka, Nwoza and Alero. The remainder of the population was inspected once. Four new cases were diagnosed microscopically and six old cases received treatment. A trophy was given for presentation to the chief who was considered to have maintained the clearings under his control in the most satisfactory manner.

In Madi six-monthly inspections of the registered population were made and no cases were recorded.

In the West Nile there were 684 cases in 1938 compared with 728 in 1937. An entomological survey was made at the end of the year. Mr. Gibbins spent six months in the West Nile District and the following are his recommendations:—

While it is practicable to reduce the density of *Glossina palpalis* to insignificant numbers, the complete eradication of the species from clearings is not achieved owing to the impossibility of preventing the passage of the occasional fly along the river.

Debushing of a rod ten yards wide on either side of the river, provided it is of adequate length, is sufficient to control the activities of the riverine *G. palpalis.* Within these limits the grass must be kept short. A neglected clearing is more dangerous than the original forest. The larger trees may remain provided they are well-spaced and clean-boled up to five yards from the ground and their foliage is not allowed to hang below a similar height above the water.

The object of the crossing-clearing should be to ensure that the density of the fly at the point where the river is crossed, does not exceed two per boy hour (a figure at which *G. palpalis* is undoubtedly innocuous from the standpoint of sleeping sickness) even when climatic conditions are particularly favourable to the activity of the fly. It is therefore recommended that all clearings should not be less than 800 yards in length with the crossing about the middle.

Small streams with *low banks* which are less than about two feet in width need not be cleared as the natural fly-density is already below an innocuous figure.

The ultimate aim should be rod-clearing of all the larger rivers in the highly populated areas. Men living in the vicinity should be employed on maintenance and allocated tasks as near to their homes as possible. Cultivation should be prohibited near the river and the presence of a belt of bush which will act both as a screen, and as a barrier against the activities of goats and cattle grazing along the river bank interfering with growing crops, is to be advocated.

The removal of dead trees and recumbent logs from the river bed within the clearing is recommended. People living in the vicinity may well be asked to perform this task and reap the benefit of the fuel.

Inspections are carried out quarterly and the whole population attends for examination.

87. *Plague.*—There were 385 cases with 376 deaths compared with 515 cases with 478 deaths in 1937.

In Busoga there was a decrease from 318 to 63. The African health orderlies' work has been extended and they have given informal talks and demonstrations in numerous villages.

At Kampala routine measures were continued and only one case occurred in the township. Rat trapping was carried out as a routine and 25 per cent. of 600 rats were examined microscopically. *B. pestis* was found present in one case.

In Teso plague broke out for the first time in the county of Usuku. Energetic measures by the department, with the assistance of the Saza and other chiefs, brought the outbreak rapidly to an end. Another outbreak in the counties of Ngora and Kumi occurred later, and, although more difficult to control owing to the greater density of population, appeared to be on the wane at the end of the year.

In view of the discovery of *R. rattus* in the railway godowns in Bunyoro, measures are being taken to keep the Kenya and Uganda Railway premises as free as possible from rodents.

88. *Yellow Fever.*—The work of the Yellow Fever Institute was continued, the survey being confined to the West Nile District and Bwamba county in Toro District. An unidentified virus has now been isolated from eight cases in the Bwamba area. Later in the year entomological studies were undertaken in this area and an unsuccessful attempt was made to isolate yellow fever virus by the inoculation of *M. rhesus* with serum-saline suspension of *A. simpsoni*. Investigations are still continuing in Bwamba as it is considered that all the possibilities there have not yet been exhausted.

(*b*) Epidemic Diseases.

89. *Cerebro-spinal fever.*—There was an increase in the incidence of this disease and it has been widely distributed. The segregation of contacts continues.

90. *Small-pox.*—No small-pox was reported. Vaccinations were carried out as follows:—

Province and District.	Population.	Number of vaccinations performed.
Buganda Province—		
Mengo district	541,827	1,059
Masaka district	189,473	6,128
Mubende district	..	..
Total	731,300	7,187
Eastern Province—		
Busoga district	385,422	6,098
Central district	372,080	32,958
Budama district	157,464	12,800
Teso district	274,238	23,707
Total	1,189,204	75,563
Western Province—		
Ankole district	289,484	1,718
Kigezi district	253,939	40,085
Toro district	197,858	5,577
Total	741,281	47,380
Northern Province—		
Bunyoro district	114,807	3,560
Acholi district	198,944	1,718
Lango district (Arua nil)	232,585	34,646
Total	546,336	39,924
GRAND TOTAL	3,208,121	170,054

(*c*) HELMINTHIC DISEASES.

91. Infections with *Ascaris* and *Ancylostoma* occur widely although definite clinical symptoms are not usually produced. Until further progress has been made with the campaign to improve rural sanitation and to ensure that latrines shall be more universally used the risk of re-infection is such as to render inadvisable the institution of any mass treatment for these helminths.

92. *T. saginata* is a common parasite especially in the Western Province. Meat inspection is carried out in all the large townships and infested meat is condemned and destroyed.

93. *Dracontiasis* is confined to the Nilotic districts of the Northern Province, and the inhabitants of the infested districts are encouraged to boil drinking water or to strain it through a cloth before use. This measure is ancillary to the endeavours which are being made to provide protected water supplies.

94. *Schistosomiasis.*—It appears that this condition is widely distributed and cases have been reported from several districts. The parasite appears to cause slight disability and there is little which can be done at present to combat it.

II. General Measures of Sanitation.

95. The original restricted water-borne sewerage scheme for Kampala was completed, and extensions to cover the whole township, including Mulago and Makerere, are now being made. The bucket system is used in the larger townships and in some of the smaller ones. In Fort Portal modifications made in the Indore system have proved very satisfactory. The Entebbe water supply was completed and the septic tank system should be completed in 1939.

III. School Hygiene.

96. In most districts frequent visits were made by medical officers and assistants to schools. School buildings have improved in general and must by the end of 1939 conform with the Public Health (School Building) Rules. Free medical treatment has been made available for those Asian school children whose parents desire it. In Jinja routine examination of the pupils at Mwiri College and the Government Indian School was carried out. The Busoga Native Administration were asked to provide money to erect model houses for African headmasters at the principal schools, and five have been built. Latrine accommodation was improved and it is hoped that further funds will be made available for both these purposes in 1939. The experiment in Teso mentioned in last year's report was continued. In Kampala inspections of school children have been made regularly. Additions were made to the Indian School and a new European School is nearing completion. Pupils at African schools have frequently been found to suffer from trachoma and although it is impossible to carry out intensive treatment in the absence of qualified

medical staff, arrangements have been made for all African children attending school to have 2 per cent. zinc sulphate lotion instilled into their eyes twice daily as a measure of prophylaxis.

IV. Labour Conditions.

97. The standard of housing of labour continues to improve and in many camps the employers provide their labour with rations. The District Medical Officer, Mbarara, reports that the Banyaruanda labourers commence work in poor condition but are found to improve when given better food. The Public Works Department road maintenance camps are by no means examples to the surrounding peasants. Early in the year one section of the Government labour camp at Kololo became overcrowded and the incidence of respiratory and intestinal conditions was considerably higher than in other sections where no overcrowding existed. The camp was extended and at the close of the year the sickness rates had fallen to that of the other labour housed at Kololo.

V. Housing and Town Planning.

98. Most medical officers report that Asian dwellings are being built to a better design and many say that existing buildings have been greatly improved, especially with regard to lighting and ventilation. Overcrowding still exists in Kampala and is difficult to deal with since no alternative accommodation is available. The standard of African housing continues to rise and the District Medical Officer, Lango, mentions that housing is improving in his district, although progress is slow; and he attributes this to the example of the Lango Health Exhibition. Reeds tied to poles with papyrus fibre have been found more suitable and economical than packing case boards, as a means of roofing and when covered with hesian treated with colas have, so far, given satisfactory results.

VI. Food in Relation to Health and Disease.

99. The Nutrition Sub-committee of the Agricultural Survey Committee have continued their work during the year. Research done by the medical officer seconded to undertake nutritional investigations has already been referred to. According to reports received from medical officers a large proportion of the people in many districts are undernourished. Although the consumption of meat and fish continues to increase in the wealthier districts where native custom does not forbid their use, it is a matter for regret that in many parts of the country fish is not eaten by the local African even when a plentiful and cheap supply is available. That this prejudice can be overcome has been shown at the Leper Settlement at Lake Bunyonyi. The fishing industry at Katwe continues to expand and smoked fish is sold in Masaka and Kampala, and salt fish is exported to the Belgian Congo. Rules for bakeries, dairies, eating houses and sodawater factories are being prepared.

B. Measures Taken to Spread the Knowledge of Hygiene and Sanitation.

100. Health propaganda has been carried out in all districts, and prizes and trophies have been given for maternity and child welfare and other activities relating to African health and welfare. The clearing of native slums in Jinja continues and a scheme for African housing has been devised. Attention to Asian bazaars has been continued and reports received from District Medical Officers indicate that there is a considerable amount of improvement. Stress has again been laid on the importance of the proper preparation of food, the cleanliness of utensils and the provision of meatsafes. Interest continues to be taken in the protected springs which the department is constructing and there can be no doubt that preference is shown for clean drinking water.

SECTION IV.—PORT HEALTH WORK AND ADMINISTRATION.

Not applicable.

SECTION V.—MATERNITY AND CHILD WELFARE.

101. 20,861 women attended for ante-natal supervision compared with 16,676 in 1937. A further 2,670 who had commenced attending in 1937, continued their visits. The following are the figures for some of the larger centres:—

	1937		1938	
	New cases.	Attendances.	New cases.	Attendances.
Entebbe	404	2,050	312	1,529
Mulago	1,205	4,424	1,380	6,520
Masaka and dispensaries ..	1,459	13,227	3,239	15,620
Mbale and dispensaries ..	3,987	8,621	5,271	11,086
Bugembe	524	2,574	576	3,111
Masindi and dispensaries ..	493	5,165	212	1,404
Hoima and dispensaries ..	672	4,208	843	6,630
Soroti and dispensaries ..	2,023	8,368	1,827	8,874
Mbarara and dispensaries ..	758	2,269	968	3,574
Fort Portal and dispensaries ..	2,246	4,766	1,676	5,983
Kabale and dispensaries ..	1,506	3,370	901	2,446
Mubende and dispensaries ..	398	1,330	1,246	5,511

102. 2,417 women who had attended for ante-natal supervision, terminated their pregnancies in hospital or at maternity centres. A further 593 who had not availed themselves of ante-natal treatment, were delivered in hospital.

103. The following table gives the results of pregnancy for women who were confined in Government institutions, and as far as they are known, for women who were confined in their own homes. It also includes the number of women who had not attended for ante-natal supervision but were confined in hospitals or maternity centres, together with the results of their confinements:—

	Women who had attended for supervision.		Women who had not attended for supervision.
	Confined in Hospital.	Confined in their homes.	
Number of women confined ..	2,417	1,832	593
Pregnancies resulting in:—			
(*a*) Miscarriage	104	48	85
(*b*) Still-birth	102	45	151
(*c*) Living child	2,211	1,739	357
Number of maternal deaths ..	26	4	60
Percentage of pregnancies resulting in:—			
(*a*) Miscarriage	4·3	2·6	14·3
(*b*) Still-birth	4·2	2·4	25·6
(*c*) Living child	91·1	94·9	60·2
(*d*) Maternal deaths ..	1·1	0·2	10·1

104. The following table gives the number of confinements and their results in some Government institutions:—

	Confinements excluding miscarriage.	Still-births.	Living births.	Maternal deaths.
Entebbe	135	7	126	2
Mulago	455	42	391	22
Masaka	575	46	515	14
Bugembe	184	3	180	1
Kamuge	144	5	137	2
Serere	114	3	111	..
Butaleja	74	10	62	2

105. The following obstetric operations were performed:—

Caesarian section	18
Forceps delivery	152
Perforation and cranioclasm	23
Internal version	11
Removal of retained placenta	68

106. 27,208 infants attended welfare centres. This number only includes healthy or relatively healthy children brought up for supervision. Sick children are shown under diseases in the sick returns from hospitals and dispensaries.

107. The following table gives the number of children attending child welfare clinics in some of the Government institutions:—

	1937		1938	
	Number of infants.	Attendances.	Number of infants.	Attendances.
Entebbe	318	839	232	676
Bugembe	275	1,537	336	1,985
Mulago Hospital, Kampala, and dispensaries..	423	2,015	671	2,112
Masindi and dispensaries	431	5,451	192	1,525
Soroti and dispensaries	3,120	12,823	2,898	16,486
Mbarara and dispensaries ..	2,409	5,408	3,613	7,924
Hoima and dispensaries	777	3,121	937	4,498
Fort Portal and dispensaries ..	1,246	4,245	4,481	11,053
Lira and dispensaries	3,694	9,272	5,211	14,060
Kabale and dispensaries	3,961	6,425	3,175	17,161

108. The percentage of miscarriages, still-births and maternal deaths is higher in the case of women who did not come for ante-natal supervision than among those who attended ante-natal clinics. As might be expected the best results were obtained in women who attended ante-natal clinics and were confined in their own homes since these were cases which gave no trouble. The results of pregnancy in those women who had attended these clinics and had been delivered in hospital are almost as good; the slight difference being due to abnormal labours in women who were advised to come to hospital for their confinements and of others who commenced labour in their houses but who sought assistance when unforeseen difficulties arose. The group whose confinements were terminated in hospital but who had not attended ante-natal clinics, was less satisfactory. In considering this group it must be remembered that a number of women are brought to hospital as a last resort by their friends when the local handywomen have failed, and the figures, therefore, are not comparable with those for the previous groups. There can be little doubt that many of the fatalities could have been avoided, had the mothers attended for ante-natal treatment.

REPORT ON THE LADY CORYNDON MATERNITY TRAINING SCHOOL, 1938.

109. No new centres have been opened and the centre in Luwero District has been closed. The centres at Ibanda and Bushenyi in Ankole District have been rebuilt.

110. Two permanent houses for midwives have been built, one at Mityana, the other at Lutete.

111. The following table gives the number of patients admitted to the wards attached to the school.

Total admissions	567
Total confinements (including those born before arrival but not miscarriages)	413
Living babies born	362

Still-births	51
Miscarriages	25
Threatened miscarriages ..	47
Maternal deaths	27
Infant deaths	20

The causes of maternal deaths were:—

Post-partum haemorrhage ..	3
Ante-partum haemorrhage ..	1
Puerperal Sepsis	3
Obstructed labour	13
Ancylostomiasis (miscarriage) ..	1
Cerebral malaria	1

Jaundice	1
Ruptured uterus	1
Heart disease and gonorrheal infection	1
Heart failure following operation ..	2

The following operations were performed:—

Caesarian section	9
Delivery by forceps	34
Perforation	21
Removal of placenta	14

Dilatation and Curetting ..	10
Internal version under anaesthetic	1
Secondary repair of perineum ..	2

112. In the out-patient department 1,061 expectant mothers attended for ante-natal supervision for the first time. The total ante-natal attendances were 2,862. Post-natal supervision of 526 babies was also undertaken.

REPORT ON THE COUNTRY CENTRES.

	Confinements, including babies born before admission but excluding miscarriages.	Still-births.	Living children born.	Miscarriages.	Threatened miscarriage.	Maternal deaths.	Infant deaths.	New ante-natal cases.	Infant welfare.	Total number of ante-natal attendances.
Bushenyi ..	95	4	91	..	..	..	1	249	618	788
Ibanda	58	4	54	5	1	..	..	107	842	633
Iganga	67	4	63	7	3	..	1	400	1,331	770
Jungo	62	..	62	1	..	..	2	408	630	1,312
Kabasanda ..	81	5	76	1	..	..	5	678	417	1,464
Kabuwoko	143	11	132	1	9	1	2	898	507	2,017
Kabwohe	49	1	48	..	3	..	1	90	661	667
Kako	63	5	58	..	..	1	3	769	339	1,845
Kapeka	52	1	51	2	..	..	3	514	302	832
Kasaka	48	2	46	1	2	..	3	613	419	1,218
Kiboga	83	..	83	8	..	..	..	364	193	818
Kikoma	38	1	37	2	3	..	2	263	385	615
Kira	46	3	43	2	1	..	..	174	426	582
Lutete	96	7	89	4	9	..	9	783	467	1,634
Mbarara	96	6	90	3	8	1	3	203	992	1,105
Mityana	76	3	73	7	1	..	1	687	414	1,515
Mukono	156	12	144	7	29	..	8	837	795	1,684
Nakifuma	161	14	147	5	1	2	3	737	882	1,474
Namulonge	53	3	50	4	4	..	1	346	456	993
Ndeje	57	5	52	7	17	1	4	541	265	819
Ngogwe	73	3	70	2	2	..	1	613	458	1,491
TOTAL ..	1,653	94	1,559	69	93	6	53	10,274	11,799	24,276

REPORT ON NSAMBYA MATERNITY TRAINING SCHOOL.

113. The following table gives the number of patients admitted to the wards attached to the school:—

Total admissions	500	Maternal deaths	15
Total confinements excluding miscarriage	414	Infant deaths	23
Miscarriages	21	Number of new women for ante-natal treatment	892
Still-births	51	Number of attendances	4,979
Living children born	363	Number of infants attending	363
Threatened miscarriage	65	Number of attendances	1,157

The following operations were performed:—

Caesarian section	12	Internal version	5
Forceps delivery	34	Retained placenta	10
Perforation and cranioclasm	3	Perineal repair	72

The causes of maternal deaths were:—

Pneumonia	2	Post-partum haemorrhage	2
Puerperal sepsis	4	Eclampsia	2
Ruptured uterus	3	Peritonitis	2

The causes of infant deaths were:—

Prematurity	17	Monster	1
White asphyxia	4	Congenital syphilis	1

114. There were from 35 to 40 students in training which is more than in any previous year. Seven passed the examination of the Uganda Midwives Board.

REPORT ON THE COUNTRY CENTRES.

	Confinements, including babies born before admission but excluding miscarriage.	Still-births.	Living children born.	Miscarriages.	Threatened miscarriage.	Other conditions.	Maternal deaths.	Infant deaths.	New ante-natal cases.	Infant welfare.	Total out-patient attendances.
Ngora	162	4	158	4	13	..	..	..	2,016	280	9,184
Nagalama	68	7	61	4	5	..	1	2	245	25	691
Nkokonjeru	185	9	176	4	8	..	..	13	344	30	1,172
Kamuli	280	7	273	3	1	1	1	..	235	100	1,733
Rubaga	78	3	75	2	..	..	..	1	137	84	829
Mitala Maria	274	18	256	10	4	..	..	2	1,068	239	8,010
Villa Maria	295	12	283	3	20	..	..	2	828	..	5,718
Katende	107	2	105	4	6	..	..	..	304	108	1,250
Kisubi	81	6	75	5	4	15	2	3	148	52	1,016
Nyenga	68	..	68	5	5	5	..	..	360	25	1,507
Namilyango	39	4	35	3	1	..	1	2	88	46	631
Gayaza	106	1	105	3	..	..	..	..	322	70	1,548
Lwala	83	10	73	12	4	5	2	4	517	..	1,320
Nagongera	95	2	93	1	..	15	1	1	213	128	1,040
TOTAL	1,921	85	1,836	63	71	41	8	30	6,825	1,187	35,649

SECTION VI.—HOSPITALS AND DISPENSARIES.

115. The following sums were spent by the Public Works Department on medical buildings:—

New Works at:—	£
ENTEBBE—	
African maternity block	2,600
Attendants' quarters	1,050
MULAGO—	
Quarters for African Assistant Medical Officer	299
Fencing Mulago Hospital	215
JINJA—	
Two female wards, African Hospital, completion of	353
One male ward, African Hospital, completion of	163
Extension to Asian Hospital, completion of	439
Sanitary and drainage installation at Asian and African Hospitals	586
Attendants' quarters	78
SOROTI—	
Quarters for African Assistant Medical Officer	340
Out-buildings for above	30
TORORO—	
Hospital unit, completion of	350
MBALE—	
Attendants' quarters	1,400
MBARARA—	
Nursing Sisters' quarters and patients' room	1,327
KITGUM—	
African Hospital unit	2,996
LIRA—	
Attendants' quarters	852
MISCELLANEOUS WORKS—	
Maintenance and minor improvements of buildings	2,008
TOTAL	£15,086

TABLE G.—MEDICAL UNITS, BEDS AND PATIENTS BY DISTRICTS.

	BUGANDA PROVINCE.					WESTERN PROVINCE.				EASTERN PROVINCE.						NORTHERN PROVINCE.						UGANDA PROTECTORATE.
	Entebbe District.	Mengo District.	Masaka District.	Mubende District.	TOTAL.	Toro District.	Ankole District.	Kigezi District.	TOTAL.	Busoga District.	Budama District.	Central District.	Teso District.	Karamoja District.	TOTAL.	Lango District.	Bunyoro District.	Acholi District.	Madi Sub-District.	West Nile District.	TOTAL.	
Medical Units.																						
European Hospitals	1	1	...	...	2	...	...	...	...	1	...	1	..	...	2	...	...	...	...	...	...	4
Asian Hospitals	1	1	1	...	3	...	...	...	...	1	1	1	1	...	4	1	1	...	...	...	2	9
African Hospitals	1	2	1	1	5	1	1	1	3	2	1	2	1	1	7	1	3	2	1	1	8	23
Dispensaries	2	8	7	6	23	9	4	4	17	8	3	7	4	...	22	4	10	9	5	12	40	102
In-Patients.																						
BEDS AVAILABLE:																						
European	7	20	...	...	27	...	...	...	...	4	...	3	...	...	7	...	...	...	...	...	...	34
Asian	4	29	3	...	36	...	...	...	...	6	4	2	4	...	16	4	3	...	...	...	7	59
African Hospitals	66	311	128	27	532	40	49	65	154	114	46	100	56	12	328	54	80	55	53	40	282	1,296
African Dispensaries	20	...	45	43	108	15	58	67	140	108	34	111	59	...	312	47	...	8	...	18	73	633
TOTAL ...	97	360	176	70	703	55	107	132	294	232	84	216	119	12	363	105	83	63	53	58	362	2,022
CASES ADMITTED:																						
European	20	467	...	...	487	...	...	...	...	26	...	17	...	...	43	...	1	...	...	...	1	531
Asian	19	1,054	57	...	1,130	1	...	...	1	103	13	7	43	...	166	6	15	...	...	...	21	1,318
African	1,328	8,993	3,091	360	13,772	973	1,385	1,191	3,549	2,959	1,124	1,967	1,377	200	7,627	2,409	1,413	1,519	364	1,088	6,793	31,741
TOTAL ...	1,367	10,514	3,148	360	15,389	974	1,385	1,191	3,550	3,088	1,137	1,991	1,420	200	7,836	2,415	1,429	1,519	364	1,088	6,815	33,590
TOTAL NUMBER OF IN-PATIENT DAYS ...	18,425	117,771	42,816	6,894	185,906	12,192	17,737	28,678	58,607	41,356	12,245	28,177	18,060	2,515	102,353	28,408	24,014	15,450	8,738	25,569	102,179	449,045
AVERAGE DAILY NUMBER IN WARDS ...	50·4	322·6	117·3	18·8	509·3	33·4	48·5	78·5	160·5	113·3	33·5	77·1	49·5	6·8	280·4	77·8	65·7	42·3	23·9	70·0	279·9	1,230·2
Out-Patients.																						
Attendances	75,935	571,340	222,651	120,814	990,740	221,717	112,878	153,343	487,938	202,951	94,373	199,260	281,959	6,873	785,416	206,139	292,872	154,963	76,394	380,616	1,110,984	3,375,078
Total New Cases.																						
European	366	1,702	41	6	2,115	19	89	43	151	453	104	162	70	...	789	59	157	100	9	27	352	3,407
Asian	950	2,777	771	25	4,523	86	59	86	231	1,503	899	68	758	...	3,228	72	885	332	23	90	1,402	9,384
African	12,858	59,444	18,127	6,874	97,303	17,299	12,504	9,647	39,450	40,940	18,510	32,918	23,778	3,243	119,389	44,357	21,153	21,065	7,017	24,405	117,997	374,139
TOTAL ...	14,174	63,923	18,939	6,905	103,941	17,404	12,652	9,776	39,832	42,896	19,513	33,148	24,606	3,243	123,406	44,488	22,195	21,497	7,049	24,522	119,751	386,930
DISPENSARIES TOTAL	14,102	76,029	32,390	23,613	146,134	67,860	27.326	26,106	121,292	62,900	16,144	62,069	68,994	...	210,107	23,103	16,964	35,413	19,517	139,771	234,768	712,301
MEDICAL EXAMINATION TOTAL ...	1,551	11,873	20,050	423	33,897	948	2,588	2,052	5,588	2,419	571	1,373	1,607	357	6,327	1,940	13,116	2,015	13,215	14,765	45,051	90,863
GRAND TOTAL	29,827	151,825	71,379	30,941	283,972	86,212	42,566	37,934	166,712	108,215	36,228	96,590	95,207	3,600	339,840	69,531	52,275	58,925	39,781	179,058	399,570	1,190,094
Surgical Operations.																						
General Anaesthesia	77	1,387	282	43	1,789	69	121	128	318	780	155	193	236	11	1,376	217	131	55	24	413	840	4,322
Spinal Anaesthesia	...	3	22	...	25	2	...	...	2	43	...	3	...	...	46	...	31	...	...	...	31	104
Other Anaesthesia	245	331	252	9	837	25	19	33	77	705	168	18	49	17	957	166	173	230	15	4	588	2,459
TOTAL ...	322	1.721	556	52	2,651	96	140	161	397	1,528	323	214	285	28	2,378	383	335	285	39	417	1,459	6,885

A LIST OF SUB-DISPENSARIES OPEN OR UNDER CONSTRUCTION IN 1938.

Name.	District.	New Cases including examinations.	Re-attendances 1938.	Year Opened.	Remarks.
Mukono	Mengo	7,870	21,927	1923	Permanent buildings.
Kasangati	,,	7,750	16,888	1923	,, ,,
Bowa	,,	8,838	36,881	1923	,, ,,
Kalagala	,,	6,266	14,596	1930	,, ,,
Kome	,,	938	6,053	1923	Island Dispensary. Temporary buildings.
Buvuma	,,	1,327	4,206	1923	Island Dispensary. Temporary buildings.
Nakasongola	,,	4,805	9,384	1931	Temporary buildings.
Wakiso	,,	11,300	21,452	1923	Permanent buildings.
Mpigi	,,	7,895	13,296	1923	Permanent buildings with ward.
Buwama	,,	6,207	8,541	1937	Temporary buildings.
Mubende Hill	Mubende	1,201	2,870	1926	,, ,,
Mityana	,,	7,737	17,072	1923	Permanent buildings.
Kibale	,,	5,771	21,075	1926	Permanent clinic block building.
Kakumiro	,,	3,381	12,849	1928	Temporary buildings.
Madudu	,,	2,441	9,483	1928	,, ,,
Kyanasoke	,,	3,082	11,802	1931	,, ,,
Kalisizo	Masaka	7,255	25,912	1923	Permanent ,,
Kalungu	,,	5,401	11,760	1927	,, ,,
Kiebbe	,,	2,550	4,504	1936	Temporary ,,
Kalangala	,,	738	2,361	1923	Island Dispensary. Temporary buildings.
Rakai	,,	4,343	7,779	1927	Temporary buildings.
Lyantonde	,,	4,837	22,695	1927	Permanent buildings.
Sembabule	,,	7,266	9,396	1937	Temporary buildings.
Kaliro	Busoga	9,331	5,282	1927	Permanent buildings with ward.
Namwendwa	,,	16,890	15,466	1925	,, ,, ,, ,,
Namungalwe*	,,	11,992	9,498	1925	,, ,, ,, ,,
Bugiri	,,	14,613	9,401	1932	Temporary buildings.
Nsinze	,,	13,762	6,092	1932	,, ,,
Buyende	,,	8,304	10,299	1936	,, ,,
Nagongera	Budama	7,283	10,584	1927	Permanent buildings with ward.
Butaleja*	,,	7,219	8,177	1927	,, ,, ,, ,,
Masafu	,,	8,861	13,634	1926	,, ,, ,, ,,
Budadiri	Bugishu	11,842	18,830	1922	Temporary buildings.
Butiru	,,	2,275	1,678	1931	,, ,,
Bulucheke	,,	8,573	9,061	1931	,, ,,
Budaka	Bugwere	9,257	8,130	1930	Permanent buildings with ward.
Bukedia	,,	8,826	3,224	1926	,, ,, ,, ,,
Kamuge*	,,	11,917	2,911	1922	,, ,, ,, ,,
Nakaloke	,,	21,296	22,054	1936	Pisé de terre building.
Katakwe	Teso	11,368	21,116	1926	Temporary buildings.
Serere	,,	24,670	32,345	1924	Permanent buildings.
Amuria	,,	22,033	29,669	1924	,, ,,
Kamod	,,	10,923	13,183	1931	Temporary buildings.
Kakabara	Toro	5,662	5,919	1922	,, ,,
Kasule	,,	7,701	13,198	1930	,, ,,
Butiti	,,	10,185	12,638	1925	,, ,,
Bundibugyo	,,	10,919	15,555	1926	Permanent buildings.
Kisomoro	,,	9,569	18,639	1926	,, ,,
Bugoye	,,	4,427	7,147	1932	Temporary buildings.
Mpondo	,,	6,084	7,812	1932	,, ,,
Kanyampara	,,	8,143	16,397	1933	,, ,,
Rwaitengya	,,	6,150	5,295	1931	,, ,,
Bushenyi	Ankole	6,902	10,137	1922	Permanent buildings.
Lwasamaire	,,	8,677	12,612	1922	,, ,,
Kinoni	,,	5,443	12,061	1931	,, ,,
Ruhoko	,,	6,304	11,335	1922	Temporary buildings.
Rukungiri	Kigezi	10,547	13,019	1922	Permanent buildings.
Kisolo	,,	5,552	29,735	1922	,, ,,
Mpalo	,,	5,567	15,348	1922	,, ,,
Kinkizi	,,	4,440	12,834	1922	Temporary buildings.
Aduku*	Lango	13,897	20,007	1922	Permanent buildings with ward.
Kaberamaido*	,,	11,330	30,318	1931	,, ,, ,, ,,

* The figures from these dispensaries are included in Tables V and VI.

A List of Sub-Dispensaries Open or Under Construction in 1938—*contd.*

Name.	District.	New cases including examination.	Re-attendances 1937.	Year Opened.	Remarks.
Aboki	Lango	16,484	35,237	1931	Permanent buildings with ward.
Omoro	,,	6,619	9,276	1935	Temporary buildings.
Dwoli	Bunyoro	2,516	37,528	1925	,, ,,
Kiziranfumbi	,,	1,637	23,365	1925	,, ,,
Kisasu	,,	1,717	9,222	1931	,, ,,
Masindi Port	,,	1,550	7,633	1925	Permanent buildings.
Kiriyandongo	,,	2,418	27,255	1926	,, ,,
Kinyala	,,	1,532	8,768	1925	,, ,,
Bujenje Bujanga	,,	3,333	23,599	1932	Temporary buildings.
Kijunjubwa	,,	512	2,186	1933	,, ,,
Bulisa	,,	1,749	18,445	1935	,, ,,
Paranga	Acholi	418	764	1934	Closed 30-6-1938.
Palabek	,,	4,137	8,997	1936	Temporary buildings.
Lokung	,,	3,237	4,939	1936	,, ,,
Pajule†	,,	8,914	6,549	1938	Temporary buildings. Opened 16-11-1938.
Minakulu	,,	4,931	7,640	1930	Temporary buildings.
Attiak	,,	8,539	11,981	1931	Permanent buildings.
Awach	,,	201	191	1932	Closed 31- 1-1938.
Abbia Ferry	,,	2,107	1,180	1934	Closed 30-11-1938.
Gere-Gere	,,	2,929	8,550	1935	Closed 30- 9-1938.
Ajumani	Madi	5,184	8,039	1927	Permanent buildings.
Zaipi	,,	3,260	2,039	1931	Temporary buildings.
Ubongi	,,	3,247	2,019	1933	,, ,,
Laropi	,,	4,475	3,655	1931	,, ,,
Lufori	,,	3,351	2,367	1935	,, ,,
Terego	West Nile	74,488	44,967	1925	Permanent buildings.
Aringa*	,,	6,707	6,488	1928	,, ,,
Pakwach	,,	17,348	19,982	1930	Temporary buildings.
Pai-Ida	,,	7,108	16,453	1930	Permanent buildings.
Okollo	,,	6,142	17,327	1934	Temporary buildings.
Warr	,,	4,889	10,899	1934	,, ,,
Udupe	,,	3,194	3,097	1932	,, ,,
Ladongo	,,	4,736	4,864	1932	,, ,,
Moicha	,,	1,454	1,737	1936	,, ,,
Koboko	,,	12,537	20,748	1937	,, ,,
Matuma	,,	4,554	8,018	1938	,, ,,
Rhino Camp	,,	3,321	11,514	1938	,, ,,

*The figures from this dispensary are included in Tables V and VI.

†A travelling nursing orderly is employed in Gulu District and the people who attend his clinics are included under Pajule.

TABLE H.

In the following table are set out the amounts of some preparations manufactured, wholly or partly, in the Pharmaceutical Section of the Medical Store during the past six years:—

		1933	1934	1935	1936	1937	1938
Tincture	*pts.*	3,137	2,217	2,305	1,789	2,109	1,645
Liniments	,,	2,273	2,852	3,798	2,486	4,494	3,646
Ointments	*lbs.*	11,376	17,848½	16,308	16,880	16,932	16,371
Dusting powder	,,	320	700	400	501	400	505
Infusions, conc.	*pts.*	464	482	650	1,485	1,457	1,691
Hard soap	*lbs.*	..	..	2,284	3,600	1,290	1,850
Soft soap	,,	9,855	11,027	14,451	6,899	17,684	9,135
Sundries	,,	1,277	506½	2,540	1,994	2,414	1,207
Bismuth sod. pot. tart.	,,	33½	42½	7½	..	..	..
Cataplasma kaolin	,,	640	1,003	1,045	1,875	1,868	2,250
Insecticide	*pts.*	292	746	1,709	1,454	2,398	1,963
Oxymels and syrups	*lbs.*	1,323	1,175	1,554	1,932	1,709	2,273
Glycerine preparations	,,	226	522	457	482	553	481
Liquors	*pts.*	786	2,032	2,828	2,526	1,234	597
Spirits	,,	468	653	966	298	740	6,629
Metal polish	*bots.*	..	..	686	1,585	940	1,281
		cc.	cc.	cc.	cc.	cc.	cc.
INJECTIONS AND SUSPENSIONS—							
Bismuth oxid. 30cc.	*bots.*	..	166,460	410,170	432,540	767,950	607,980
Emetine hydrochlor. 10cc.	*bots.*	1,800	5,720	10,600	11,710	7,180	15,310
Quinine bihydrochlor. 10cc.	,,	3,500	11,360	15,000	22,240	30,350	53,830
Camphor in oil	,,	..	490	1,720	2,540	5,280	1,830

SECTION VII.—REPORT ON PRISONS.

116. The details for each Protectorate Prison are as follows:—

	Accomodation available.	Daily average in Prison.	Daily average on sick list.	Deaths.
Central Prison, Luzira	883	860	8	16
Masaka	65	8	0·002	1
Mubende	26	2	0·025	..
Jinja	78	40	3	2
Mbale	90	74	10	..
Soroti	30	21	1	..
Tororo	16	4	0·06	1
Masindi	34	20	2·7	..
Lira	120	45	8	1
Arua	77	76	5·86	..
Gulu	78	74	7·52	1
Mbarara	37	23	0·6	1
Fort Portal	15	13	5·33	1
Moroto	41	21	0·3	1
Total	1,590	1,281	52·397	25

117. The commonest complaints were malaria, tropical ulcer, minor injuries and diseases of the respiratory tract. During the year some cases of Vitamin A deficiency were observed in Luzira prison but the condition disappeared after the addition of sweet potatoes and cod liver oil to the diet. There were 25 deaths. The causes were:—

Senility	1	Cerebral syphilis	2
Mitral stenosis	1	Pulmonary tuberculosis ..	5
Pneumonia	7	Severe diarrhoea	1
Amoebic dysentery	1	Typhoid fever	1
Chronic nephritis	1	Cerebral thrombosis	1
Volvulus	1	Asphyxia	1
Heart failure	1	Bacillary dysentery	1

118. Satisfactory progress has been made with the provincial prison for Buganda at Luzira and a site has been chosen at Mbale for the Eastern Province.

NATIVE ADMINISTRATION PRISONS.

119. The standard of Native Administration prisons continues to improve, but diets are still in many cases inadequate, and overcrowding has not been eliminated everywhere. The health of the inmates was generally satisfactory. In all districts, medical officers or their assistants paid regular visits to the prisons.

SECTION VII A.—PROTECTORATE MENTAL HOSPITAL.

120. There were 55 males and 25 females admitted for observation as to their state of mind. Four males died whilst under observation, and 34 males and 14 females were certified and adjudicated by a magistrate. One Asian male and one Asian female were admitted. The male patient died and the female was still under treatment at the end of the year.

There were 36 deaths:—

	Males.	Females.
Epilepsy	3	1
Heart failure	2	..
Chronic meningo-encephalitis	5	1
Chronic meningitis	2	..
Syphilitic aortitis	1	..
Abscess of liver	1	..
Pulmonary abscess	1	..
Lobar pneumonia	2	..
Cerebral syphilis	6	..
Pulmonary tuberculosis	1	1
Pneumonia (unclassified)	2	1
Bacillary dysentery	2	..
Enteric fever	1	..
Asthenia	1	1
Dementia paralytica and inanition ..	1	..

MENTAL HOSPITAL.

TABLE SHOWING THE MOVEMENTS OF THE MENTAL HOSPITAL POPULATION FOR EACH YEAR FOR THE YEARS 1922—1938 TOGETHER WITH RECOVERY AND DEATH RATES.

Year.	First Admissions.			Re-Admissions.			Total Admissions.			Total Number under Treatment.			Number Discharged.			Number Died.			Number Remaining at end of Year.			Average Daily number on Register.			Percentage of Discharges on Total Admissions.			Percentage of Deaths on Average Daily Number on Register.		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
1922	11	3	14	1	..	1	12	3	15	36	6	42	7	1	8	9	..	9	20	5	25	20	3	23	58.3	33.3	53.3	45.0	..	21.4
1923	31	6	37	..	..	..	31	6	37	51	11	62	12	3	15	10	2	12	29	6	35	26	6	32	38.7	50.0	40.5	38.4	33.3	37.5
1924	20	8	28	..	..	..	20	8	28	49	14	63	8	..	8	12	3	15	29	11	40	29	9	38	40.0	..	28.5	41.3	33.3	39.4
1925	26	4	30	..	..	..	26	4	30	55	15	70	3	..	3	9	3	12	43	12	55	32	11	43	11.5	..	10.0	28.1	27.2	27.9
1926	29	13	42	1	..	1	30	13	43	73	25	98	5	1	6	16	4	20	52	20	72	48	16	64	16.6	7.6	13.9	33.3	25.0	31.2
1927	15	5	20	2	..	2	17	5	22	69	25	94	15	7	22	17	4	21	37	14	51	38	18	56	88.2	140.0	100.0	44.7	22.2	37.5
1928	21	5	26	3	1	4	24	6	30	61	20	81	2	..	2	18	1	19	41	19	60	37	16	53	8.3	..	6.6	48.6	6.2	35.8
1929	22	7	29	1	..	1	23	7	30	64	26	90	10	4	14	14	1	15	40	21	61	37	20	57	43.4	57.1	46.6	37.8	5.0	26.3
1930	14	3	17	1	..	1	15	3	18	55	24	79	6	4	10	9	2	11	40	18	58	37	19	56	40.0	133.3	55.5	24.3	10.5	19.6
1931	16	6	22	1	1	2	17	7	24	57	25	82	5	3	8	6	4	10	46	18	64	42	17	59	29.3	42.8	33.3	14.3	23.5	16.9
1932	18	2	20	1	..	1	19	2	21	65	20	85	5	..	5	14	2	16	46	18	64	47	18	65	26.3	..	22.9	29.8	11.1	25.0
1933	14	2	16	..	..	..	14	2	16	60	20	80	5	..	5	10	3	13	45	17	62	45	17	62	35.7	..	31.2	37.4	17.6	20.9
1934	20	7	27	2	..	2	22	7	29	67	24	91	7	1	8	17	5	22	43	18	61	44	17	61	31.8	14.2	27.6	38.6	29.4	36.0
1935	24	7	31	..	..	..	24	7	31	67	25	92	3	2	5	4	1	5	60	22	82	45	18	63	12.5	28.5	16.1	8.8	5.5	7.9
1936	46	13	59	2	..	2	48	13	61	108	35	143	21	4	25	20	7	27	67	24	91	70	23	93	43.7	30.7	41.0	28.5	30.4	29.0
1937	59	16	75	3	1	4	62	17	79	129	41	170	13	7	20	19	5	24	97	29	126	77	27	104	21.0	41.2	25.3	24.7	18.5	23·1
1938	55	25	80	2	2	4	57	27	84	131	52	183	16	4	20	31	5	36	107	47	154	105	40	145	30.2	13.8	24.4	29.5	12.5	24.8
TOTALS	441	132	573	20	5	25	461	137	598	..	..	..	143	41	184	235	52	287	..	..	..	..	..	..	..	..	..	..	..	..

SECTION VIII.—METEOROLOGY.

121. All available information is printed in the Blue Book.

SECTION IX.—SCIENTIFIC.

Scientific papers published:—

Mr. G. H. E. Hopkins.

"Cotton and Plague in Uganda" with an appendix on postmortem examinations of rats used in the experiments, by Dr. R. S. F. Hennessey. Journal of Hygiene, Vol. XXXVIII, No. 2, March, 1938.

Mr. E. G. Gibbins.

"Notes on Ethiopian Simuliidae—II". Annals of Tropical Medicine and Parasitology, Vol. XXXII, No. 1, April, 1938.

"The Mouth Parts of the Female in *Simulium damnosum* Theobald, with special reference to the transmission of *Onchocerca volvulus* Leuckart". Annals of Tropical Medicine and Parasitology, Vol. XXXII, No. 1, April, 1938.

Dr. L. J. A. Loewenthal.

"Multiple Idiopathic Haemorrhagic Sarcoma of Kaposi". Archives of Dermatology and Syphilology, Vol. XXXVII, p. 972.

Dr. A. W. Williams.

"Heart Disease in the Native Population of Uganda, Part I—Syphilitic Heart Disease". East African Medical Journal, Vol. XV, p. 279.

Dr. J. P. Mitchell.

"On the Causes of Obstructed Labour in Uganda". East African Medical Journal, Vol. XV, p. 177.

Dr. A. F. Brown.

"*Trypanosomiasis gambiensis*, some observations in Uganda and their bearing on prophylaxis". Journal of Tropical Medicine and Hygiene, June to September, 1938.

THE ANNUAL REPORT OF THE UGANDA MEDICAL SCHOOL.

Fourteen students were in residence at Mulago and seven third year students lived at Makerere and attended classes at the Medical School. At an examination held in April a student who was referred in 1937, failed in midwifery for the third time and was not permitted to continue his studies.

Third Examination Part II (Medicine, Surgery, Midwifery, Preventive Medicine and Forensic Medicine).

The first examination under the new curriculum was held in December and all four candidates passed, one with distinction in medicine. Preventive and forensic medicine were included as separate subjects.

Third Examination Part I (Pathology and Pharmacology).

There were four candidates. All passed in pharmacology, three with distinction; one failed in pathology and was referred.

Second Examination (Anatomy and Physiology).

There were seven candidates: six passed, three with distinction in anatomy; one failed in both subjects and was referred.

First Examination (Preliminary Sciences).

There were fourteen entrants: nine were successful. One who passed in all subjects, was not satisfactory in mathematics; he was allowed to proceed to the third year of the course but will be re-examined in this subject.

The Keane medal was obtained by Mr. E. K. Katumba.

External Examiners.—

S. Forrest, M.A., M.B., Ch.B., Midwifery.
C. J. Macquillan, B.A., M.D., Pharmacology.
H. J. O'D. Burke-Gaffney, B.A., M.D., Pathology and Forensic Medicine.
C. E. Roberts, M.A., M.B., Ch.B., D.T.M. & H., F.R.C.S. (Edin.), Anatomy and Surgery.
F. L. Gee, M.A. (Oxon), Physics.
D. Harvey, M.A., B.Sc., Ph.D., Chemistry.
A. W. Williams, M.B. (Camb.), D.T.M. & H., Physiology and Biology.
K. A. T. Martin, M.D., Ch.B., D.P.H., Preventive Medicine.

The most significant comments of the external examiners were:—

Dr. Burke-Gaffney and Dr. Macquillan expressed their gratification at the high standards reached in the subjects in which they examined.

Dr. Williams considered that the teaching of practical physiology was below the required standard and thought the staff, including technicians, was inadequate.

Dr. Forrest was satisfied with the theoretical knowledge of the students but felt they lacked practical experience in the out-patient department.

TRAINING OF NURSES AND NURSING ORDERLIES.

Male Nursing Orderlies.—Fourteen out of nineteen recruited at the beginning of the year passed the first examination for the nursing certificate.

Thirteen sat for the second examination: six passed.

Female Nurses.—Five candidates were entered for the first examination and all passed.

There were two entrants for the second examination and both passed.

The Department is indebted to Dr. R. Y. Stones, O.B.E., Principal of the Church Missionary Society Hospital, Mengo, for providing an external examiner, Miss Flack, to conduct the examinations.

TRAINING OF DISPENSERS.

Nine out of ten candidates passed the first examination for the dispenser's certificate.

There were two entrants for the second examination and both passed.

Three candidates were presented for the third and final examination and all passed.

The examinations were conducted by Mr. L. C. Bell, M.P.S.

TRAINING OF SANITARY INSPECTORS (*See* page 15).

The Council of the Royal Sanitary Institute have approved the examiners' recommendations and have recorded their appreciation of the progress which has been made in training the candidates and in the standard which it is already possible to require.

LABORATORY REPORT.

Laboratory orderlies were in training and examinations were held in June and December, at which two learners qualified for further training, five orderlies passed for promotion to Grade V and ten to Grade IV.

A course of lectures and demonstrations on Bacteriology was given to the final year class of sanitary students and a lecture on "Medical Exhibits" was given to the Police Probationary Sub-Inspectors at the end of their course.

The Wassermann reaction has been continued this year, mainly to check the results of Kahn tests, a comparison of results obtained from the two methods in 327 sera giving—

Absolute agreement in 268 or 81·9 per cent.
Relative agreement in 41 or 12·5 per cent.
Absolute disagreement in 18 or 5·5 per cent.

These figures are thought to be satisfactory for a population in which only about 45 per cent. have a negative Kahn.

This year culture of all faeces samples suggestive in any way of dysentery has been established as routine, and has given interesting results in revealing the types of dysentery organisms which may be found. *B. flexner* was isolated from forty specimens, *B. ambiguum* Schmitz from seven specimens, of which five strains were confirmed by agglutination with serum kindly supplied by the Medical Research Laboratory, Nairobi, and *B. sonnei* twice only, in one case from a persistent carrier.

From a case of food-poisoning in an European, the causal organism *Bacterium typhi-murium* was isolated.

An African woman patient was found to have over 95 per cent. of her mature red blood corpuscles oval in shape, resembling the corpuscles of a camel. This rare condition, described as Ovalocytosis, is a simple Mendelian dominant not associated with ill-health.

The total number of examinations carried out in the laboratory was 53,028. Below is given a summary of the work done:—

(1) PARASITOLOGY—	
Blood films	13,689
Dark ground examinations	28
Faeces	4,520
Urine	7
(2) SEROLOGY—	
(*a*) (1) Kahn test on sera	21,355
(2) Kahn test on cerebro-spinal fluid	240
(*b*) The Wassermann reaction	1,304
(*c*) Agglutination tests—Enteric group	411
Brucella group	39
Weil Felix reaction	46

(3)	BACTERIOLOGY—	
	(*a*) Blood cultures	39
	(*b*) Urine cultures	56
	(*c*) Faeces cultures	305
	(*d*) Sputum for *M. tuberculosis*	838
	Sputum for *B. pestis*	778
	(*e*) Cerebro-spinal fluid	161
	(*f*) Swabs and smears	1,361
	(*g*) Skin scrapings	5
	(*h*) Pleural fluid	6
	(*i*) Vaccines	24
	(*j*) Sterility tests on samples of drugs prepared for injection by Medical Store	82
	(*k*) Water samples	211
(4)	CLINICAL PATHOLOGY—	
	(*a*) Blood	1,050
	(*b*) Cerebro-spinal fluid	346
	(*c*) Joint, pleural or ascitic fluids	101
	(*d*) Urine	3,494
	(*e*) Faeces, occult blood	524
	(*f*) Miscellaneous examinations	12
(5)	Biochemical examinations	1,113
(6)	AUTOPSIES AND HISTO-PATHOLOGY—	
	(*a*) Autopsies	316
	(*b*) Histo-pathological examinations	352
(7)	Medico-legal examinations	81
(8)	CHEMICAL EXAMINATIONS—	
	For the Medical Department	101
	For the Agricultural Department	1
	For the Kenya and Uganda Railways and Harbours	2
	For the Police Department	29
	Miscellaneous	1

REPORT OF THE GOVERNMENT DENTAL SURGEON.

The treatment of officials, European and Asiatic, and their families, is shown in the following tables:—

(1)	Appointments	1,413
(2)	Conservation work:—	
	Silver amalgam fillings	622
	Porcelain cement stoppings	131
	Zinc and copper cement stoppings	15
	Zinc oxide stoppings	99
(3)	Treatment:—	
	Scalings	289
	Carbolized dressings	11
	Devitalisings	2
	Zinc chloride and silver nitrate applications	24
	Extractions with local anaesthetics	147
	Extractions with general anaesthetics	5
(4)	Prosthetic work:—	
	Dentures	18
	Repairs	63
	Crowns	2
	Orthodontic appliances	2

Tours.—Two visits each were paid to the following stations:—

Jinja, Mbale, Masaka, Mbarara, Fort Portal and Masindi. One visit was paid to Arua.

Teaching.—A course of lectures and demonstrations was given to the sixth-year students at the Medical School at Mulago on the administration of local anaesthetics, extractions, the relief of pain, simple temporary fillings and oral hygiene.

Appendix I.

REPORT OF THE ENTOMOLOGIST.

Medical Entomology.

The training of the female ferrets referred to in last year's report was completed. Field tests showed that they were unable to reach places easily accessible to rodents. It appears therefore that further work with ferrets is not justified.

Rat and flea surveys were carried out at Tororo, Arua, Bunyoro and Masaka.—

(*a*) *Tororo.*—It was found that in spite of the number of *R. rattus* in dwellings, no *X. cheopis* occurred and that the common flea was *X. brasiliensis.* A flea greatly resembling *X. cheopis* was found on field rats, and Dr. Jordan, to whom specimens were submitted, described them as a new species *X. bantorium.* This species is closely related to *X. cheopis* and its discovery may serve to explain some apparent anomalies which appeared to have existed in the distribution of rats and fleas in Uganda. Fleas which were thought to be *X. cheopis,* have been found in areas where *R. rattus* was absent and it is not improbable that these have been *X. bantorium.*

(*b*) *Arua.*—An extensive survey of all parts of the West Nile District has confirmed the absence of *R. rattus.* A single specimen was captured on a lighter at Rhino Camp.

(*c*) *Bunyoro.*—As a result of the finding of *R. rattus* at Rhino Camp a survey was made in Bunyoro and *R. rattus* was found to be well established in godowns at Masindi Port and at Butiaba although not elsewhere. It seems highly probable that the *R. rattus* has been brought to Butiaba by railway traffic.

(*d*) *Masaka.*—An extensive survey was made but the material collected has not yet been examined.

Mosquitoes.—The investigation into the incidence of *A. aegypti* in African houses in Kampala was continued. The interiors of 82 huts, selected because they had in their compounds one or more receptacles containing larvae, were examined but in no case were adult *A. aegypti* found. It is probable that the normal African house is too dark to provide harbourage for *A. aegypti.*

Larvivorous fish.—Twelve specimens of *Gambustia affinis* were received in October and they are now being bred with a view to field tests.

Tse-tse fly.—Further surveys were completed in Gulu and clearings on the Gulu–Kitgum road were examined.

A visit was paid to the Mpologoma Sleeping Sickness area in connection with an afforestation scheme.

Spirillum tick.—Tests carried out with a paradichlor-benzene spray showed that the preparation was of little use in badly constructed and dilapidated buildings. The spraying of a well constructed building was a complete success.

Education.—All of July was taken up in training students in medical entomology. This arrangement was found to be more satisfactory than the former practice by which classes were held on one or two days per week over a long period.

Appendix II.

(A) STAFF.

Principal Appointments, Promotions, Changes, etc.

Appointments:—

Miss W. J. Williams to be Nursing Sister	25–11–37
Mr. A. V. Mills to be Dental Mechanic	11–12–37
Miss F. E. Grieve to be Nursing Sister	20– 1–38
Miss F. M. Ray to be Nursing Sister	5– 2–38
Miss F. M. R. Milton to be Nursing Sister	17– 2–38
Miss G. W. Angell to be Nursing Sister	2– 4–38
Miss M. Bennett to be Nursing Sister	30– 4–38
Mr. D. W. Munday to be Sanitary Inspector	5– 4–38
Dr. L. J. Lanceley to be Medical Officer	12– 8–38
Miss J. L. Mackie to be Nursing Sister	20– 8–38
Mr. E. Walker to be Assistant Superintendent and Dispenser	21– 9–38
Miss S. M. Evans to be Nursing Sister	29– 9–38
Dr. G. M. Gibbon to be Medical Officer	8–10–38
Miss L. Mckeown to be Nursing Sister	15–10–38
Miss L. N. Orr to be Nursing Sister	15–10–38
Miss M. E. Bidgood to be Nursing Sister	27–10–38

Acting Appointments:—	*from*	*to*
Dr. J. M. Semple, Senior Medical Officer, to act as Assistant Director of Medical Services	1– 1–38	14– 3–38
Miss E. A. McGill, Senior Nursing Sister, to act as Lady Superintendent of Nurses	1– 1–38	11– 6–38
Dr. J. M. Semple, Senior Medical Officer, to act as Deputy Director of Medical Services	15– 3–38	17–10–38
Dr. J. C. St. G. Earl, Senior Medical Officer, to act as Assistant Director of Medical Services	15– 3–38	17–10–38
Mr. F. E. Weaver, Sanitary Inspector, to act as Senior Sanitary Inspector	17– 1–38	21– 9–38
Mr. L. C. Bell, Assistant Superintendent and Dispenser, to act as Medical Storekeeper and Pharmacist	2– 7–38	31–12–38
Mr. D. O. Swane, Clerk, to act as Office Superintendent	16– 7–38	31–12–38
Mr. A. H. Mowat, Specialist (Surgeon), to act as Medical Superintendent and Principal, Medical School, Mulago	21– 7–38	30–10–38
Dr. J. C. St. G. Earl, Senior Medical Officer, to act as Deputy Director of Medical Services	18–10–38	31–12–38
Mr. C. H. Dowdeswell, Clerk, to act as Hospital Superintendent, Mulago	14–11–38	31–12–38

Promotion:—

Mr. G. Gillanders, Sanitary Inspector, to be Senior Sanitary Inspector	1– 1–38

Transfers:—

Dr. H. S. de Boer, M.C., Deputy Director of Medical Services, to be Director of Medical Services, Nyasaland	12– 8–38
Dr. R. S. McElroy, Medical Officer, to be Senior Medical Officer, Tanganyika Territory	21– 7–38
Miss B. Roques, Nursing Sister, to Malayan Nursing Service	8– 4–38
Miss A. C. Miller, Nursing Sister, to Zanzibar	22– 6–38

Resignations:—

Miss D. Jago, Nursing Sister	26– 6–38
Miss E. S. Edminson, Nursing Sister	11–11–38
Miss M. C. Highley, Nursing Sister	5– 3–38
Miss A. D. Hunter, Nursing Sister	5– 1–38
Miss M. D. Steel, Nursing Sister	22– 5–38
Miss B. A. Priestley, Nursing Sister	27– 8–38
Miss K. E. Howard, Nursing Sister	20–10–38

Termination of Appointment:—

Dr. L. J. Cardozo, Sub-Assistant Surgeon 3–12–38

Retirement:—

Dr. C. R. Lutze-Wallace, Assistant Director of Medical Services .. 9– 7–38

Invalidings:—

Miss D. B. Reeves, Nursing Sister 17– 2–38

Changes in Titles:—

Mr. J. L. Hewlett-Parker, Assistant Superintendent and Dispenser, to be X-ray Operator.

Mr. F. Smith, Sanitary Inspector, to act as Assistant Instructor of Hygiene.

Mr. E. C. Haddon, Analytical Chemist, to be Government Chemist.

Honours:—

The following promotions and admissions to the Order of St. John of Jerusalem were made by His Majesty, the Sovereign Head of the Order:—

Dr. W. H. Kauntze, C.M.G., M.B.E., to Commander from Officer (Brother).
Dr. J. P. Mitchell, O.B.E., to Officer from Serving Brother.
Dr. R. Y. Stones, O.B.E., to Officer from Serving Brother.
Mr. J. M. Naluma, as Serving Brother.

His Royal Highness the Grand Prior has approved that Vellum Votes of Thanks should be awarded to the following for services rendered:—

Dr. A. J. Boase.
Miss E. A. McGill.
Mrs. M. M. Hodson.

(B) List of Ordinances affecting Public Health, etc., enacted during the year.

Medical Registration (Amendment) Ordinance, 1938.
Mental Treatment Ordinance, 1938.
Mental Treatment Rules, 1938.
Sleeping Sickness (Amendment) Ordinance, 1938.
Sleeping Sickness (Fishing) (Amendment) Rules, 1938.
Sleeping Sickness (Registration of Vessels) (Amendment) Rules, 1938.
Public Health (School Buildings) Rules, 1938.

Registration of Medical Practitioners and Dentists.

The Ordinance governing registration came into force on the 1st July, 1913, since when and up to the 31st December, 1938, the following have been placed on the registers:—

Registered Medical Practitioners	214
Registered Medical Practitioner and Dentist	1
Dentists	8
Licensed Medical Practitioners	108

The numbers actually on the registers on the 31st December, 1938, were:—

Registered Medical Practitioners	107
Dentists	8
Licensed Medical Practitioners	45

Registration of Midwives.

The Ordinance governing registration came into force on the 31st March, 1927, since when and up to the 31st December, 1938, the following have been placed on the registers:—

Europeans and Asians	112
Africans	261

The numbers actually on the registers on the 31st December, 1938, were:—

Europeans and Asians	75
Africans	240

(C) Financial.

The expenditure on medical services was £185,000, which represents 9·9 per cent. of the total revenue of the Protectorate.

The total revenue of the Department was £10,000.

Table I.

SANCTIONED ESTABLISHMENT.

The establishment was as follows:—

Administrative Division.

Director of Medical Services.
Deputy Director of Medical Services.
Assistant Director of Medical Services.
Office Superintendent.
Lady Clerk and Stenographer.
European Storekeeper and Pharmacist.
Asiatic Assistant Storekeeper.
11 Asiatic Clerks.

Executive Division.

5 Senior Medical Officers.
33 Medical Officers.
2 European Hospital Superintendents.
3 European Assistant Superintendents and Dispensers.
1 Instructor of Hygiene.
1 Assistant Instructor of Hygiene.
1 Senior Sanitary Inspector.
14 European Sanitary Inspectors.
1 X–Ray Operator.
1 Senior Sub-Assistant Surgeon.
11 Sub-Assistant Surgeons.
1 Asiatic Assistant Pharmacist.
1 Asiatic Sanitary Inspector.
2 Asiatic Cooks for European and Asiatic Hospitals.
1Relief Asiatic Cook.

Nursing Staff.

1 Lady Superintendent of Nurses.
2 Senior Nursing Sisters.
32 Nursing Sisters.
5 Asiatic Nurses and Probationers.

Laboratories Division.

1 Senior Pathologist.
2 Pathologists.
1 Analytical Chemist.
3 European Laboratory Assistants.

SPECIAL APPOINTMENTS.

- 1 Medical Superintendent and Principal, Medical School.
- 1 Specialist (Surgeon).
- 1 Dental Surgeon.
- 1 Dental Mechanic.

AFRICAN ESTABLISHMENT.

- 1 African Laboratory Assistant.
- 31 Senior African Medical Assistants. (African Civil Service).
- 9 African Clerks. (African Civil Service).

A varying number of African staff, including nursing orderlies, laboratory orderlies, health orderlies, midwives, dispensing orderlies, clerks, cooks, nurses, and also menial staff at all hospitals.

Table II.

ACTUAL EXPENDITURE.

	£	s.	cts.
Personal Emoluments	104,654	4	31
Other Charges:—			
Stores, furniture and equipment	26,423	13	70
Upkeep of hospitals and medical school	9,655	10	91
Control of epidemic and endemic diseases	3,615	8	29
Promotion of public health and infant welfare ..	466	3	08
Leprosy relief measures	1,449	17	60
Miscellaneous services (including motor and bicycle allowances, maintenance of motor vehicles, water charges, telephone rentals, upkeep of hospital grounds, course of instruction to medical staff, uniforms for African staff, etc.)	21,172,	14	48
	167,437	12	37
Grants to Missions:—			
Contribution to Lady Coryndon Maternity School and grants to missions for maintenance of midwifery centres and midwives	2,260	0	00
Grants to Church Missionary Society for training African Nursing Sisters	1,600	0	00
	3,860	0	00
Special Expenditure:—			
Anti-malarial measures—afforestation	1,295	19	00
Yellow fever investigations	5,174	0	81
X–Ray plant	2,167	2	79
Control of leprosy	2,000	0	00
Motor vans for Sanitary Inspectors	456	17	65
Motor ambulances	706	17	83
Reserve stock of Medical Stores	1,764	5	49
Occupational therapy	20	0	00
Grant in aid of European ladies' hostel at Kampala	152	0	00
	13,737	3	57

REVENUE.

The total amount of revenue collected was as follows:—

	£	s.	cts.
Hospital fees, sales of medicines and surgical stores, registration fees	9,972	9	81
Re-imbursements from Kenya and Uganda Railways and Harbours on account of medical and sanitary services	1,857	4	17
Contribution from Native Administrations towards cost of medical attendants and stores for sub-dispensaries	6,135	0	00
	£17,964	13	98

Table III.

RETURN OF STATISTICS OF POPULATION.

The only statistics available are embodied in the Blue Book.

Table IV.

METEOROLOGICAL RETURN.

All available information under this head is embodied in the Blue Book.

TABLES V AND VI.—RETURN OF DISEASES AND DEATHS FOR THE YEAR 1938.

DISEASES	TABLE V.							TABLE VI.	
	Remaining in Hospital at end of 1937.	Yearly Admissions.		Total Cases Treated.	Total deaths.		Remaining in Hospital at end of 1938.	All Cases including both In- and Out-Patients.	
		Males.	Females.		Males.	Females.		Males.	Females
1. (*a*) Typhoid fever	6	110	27	143	30	5	8	110	27
(*b*) Paratyphoid fever	3	4	1	8	2	..	..	5	2
2. Typhus fever	..	2	..	2	..	..	..	2	..
3. Relapsing fever	7	234	36	277	15	1	..	321	68
4. Undulant fever	..	1	..	1	..	..	1	2	..
5. Smallpox	..	..	..	..	..	..	..	..	..
6. Measles	5	145	24	174	..	..	2	586	339
7. Scarlet fever	..	..	..	..	..	..	..	..	..
8. Whooping-cough	1	82	46	129	3	3	2	304	288
9. Diphtheria	..	1	..	1	..	..	..	1	..
10. Influenza	9	527	130	666	3	..	1	8,012	2,758
11. Cholera	..	..	..	..	..	..	..	..	..
12. Dysentery—									
(*a*) Amœbic	5	150	59	214	10	2	8	425	205
(*b*) Bacillary	6	153	34	193	10	2	2	261	88
(*c*) Unclassified	7	98	23	128	6	1	1	780	357
13. Plague—									
(*a*) Bubonic	..	..	1	1	..	1	..	1	1
(*b*) Pneumonic	..	6	2	8	5	2	..	6	2
(*c*) Septicaemic	..	..	1	1	..	..	..	..	1
14. Acute poliomyelitis	1	1	3	5	..	1	..	6	3
15. Encephalitis lethargica	1	2	..	3	1	..	..	4	..
16. Cerebro-spinal fever	12	215	54	281	116	23	8	224	58
17. Rabies	..	..	..	..	..	..	..	..	..
18. Tetanus	..	3	2	5	2	..	..	3	2
19. Tuberculosis of the respiratory system	16	183	45	244	54	6	16	370	91
20. Other tuberculous diseases	5	45	19	69	15	3	5	71	29
21. Leprosy	..	34	10	44	1	..	3	388	149
22. Venereal diseases—									
(*a*) Syphilis	53	805	310	1,168	20	12	22	11,691	8,885
(*b*) Gonorrhoea	35	787	194	1,016	21	..	30	5,297	1,558
(*c*) Other venereal diseases	20	363	57	440	14	1	14	1,371	352
23. Yellow fever	..	..	..	..	..	..	..	..	..

DISEASES,	TABLE V.							TABLE VI.	
	Remaining in Hospital at end of 1937.	Yearly Admissions.		Total Cases Treated.	Total deaths.		Remaining in Hospital at end of 1938.	All Cases including both In-and Out-Patients.	
		Males.	Females.		Males.	Females.		Males.	Female.
24. Malaria—									
(*a*) Benign tertian	1	61	15	77	3	..	..	455	114
(*b*) Subtertian	17	1,514	608	2,139	63	21	19	7,137	3,073
(*c*) Quartan	4	187	84	275	1	1	2	909	429
(*d*) Unclassified	11	1,002	253	1,266	21	5	24	16,956	8,191
25. Blackwater fever	1	37	8	46	7	4	1	76	12
26. Kala-azar	..	..	..	..	..	..	..	..	..
27. Trypanosomiasis	1	101	63	165	4	1	28	101	63
28. Yaws	15	387	232	634	2	..	23	12,457	9,399
29. Other protozoal diseases	..	11	3	14	1	1	..	14	3
30. Ankylostomiasis	7	383	287	677	3	1	24	1,430	606
31. Schistosomiasis	1	71	31	103	3	1	7	168	79
32. Other helminthic diseases	7	201	106	314	2	1	6	2,175	745
33. Other infectious and/or parasitic diseases	1	255	45	301	12	5	9	725	186
34. Cancer and other tumours—									
(*a*) Malignant	1	62	32	95	12	4	2	67	42
(*b*) Non-malignant	1	74	56	131	5	3	5	175	130
(*c*) Undetermined	..	4	2	6	..	..	..	4	2
35. Rheumatic conditions	4	194	54	252	1	2	3	15,512	7,038
36. Diabetes	..	13	1	14	2	..	..	18	1
37. Scurvy	1	11	..	12	2	..	..	11	..
38. Beri-Beri	..	..	1	1	..	..	..	..	1
39. Pellagra	..	6	5	11	2	1	..	10	5
40. Other diseases—									
(*a*) Nutritional	..	18	9	27	1	..	2	131	82
(*b*) Endocrine glands and general	2	58	13	73	3	..	1	1,130	591
41. Diseases of the blood and blood-forming organs	8	151	53	212	19	5	11	521	408
42. Acute and chronic poisoning	1	20	6	27	1	..	..	41	7
43. Cerebral haemorrhage	..	8	5	13	4	1	..	10	5
44. Other diseases of the nervous system	13	257	94	364	31	8	12	6,258	2,565
45. Trachoma	7	88	56	151	..	..	4	2,015	1,545
46. Other diseases of the eye and annexa	15	243	92	350	1	..	4	8,213	5,076
47. Diseases of the ear and mastoid sinus	5	73	55	133	3	1	1	3,819	2,611
48. Diseases of the circulatory system—									
(*a*) Heart diseases	4	116	38	158	32	7	4	491	253
(*b*) Other circulatory diseases	12	244	93	349	6	3	3	1,491	665
49. Bronchitis	12	332	159	503	4	6	8	3,738	2,033

50. Pneumonia—									
(*a*) Broncho-pneumonia	4	228	147	379	59	32	9	364	238
(*b*) Lobar-pneumonia	29	1,309	251	1,589	297	52	22	1,377	321
(*c*) Otherwise defined	2	79	23	104	16	5	5	169	57
51. Other diseases of the respiratory system	4	283	89	376	10	..	9	20,427	8,949
52. Diarrhoea and entiritis—									
(*a*) Under 2 years of age	..	55	28	83	5	3	2	1,134	1,022
(*b*) Over 2 years of age	1	99	79	179	6	8	1	3,134	1,927
53. Appendicitis	2	43	13	58	1	..	1	50	17
54. Hernia, intestinal obstruction	21	525	39	585	50	5	29	846	57
55. Cirrhosis of the liver	..	40	7	47	11	1	3	48	7
56. Other diseases of the liver and biliary passages	4	118	32	154	16	2	6	521	220
57. Other diseases of the digestive system	19	534	294	847	39	16	15	20,314	11,752
58. Nephritis (all forms)—									
(*a*) Acute	7	48	18	73	16	3	4	97	45
(*b*) Chronic	4	40	9	53	17	3	1	66	24
59. Other non-venereal diseases of the genito-urinary system ..	27	517	468	1,012	8	9	32	1,422	1,687
60. Diseases of pregnancy, childbirth, and the puerperal state—									
(*a*) Abortion	9	..	255	264	..	11	4	..	339
(*b*) Ectopic gestation	3	..	2	5	..	..	..	..	2
(*c*) Toxoemias of pregnancy	..	..	46	46	..	1	..	..	49
(*d*) Other conditions of the puerperal state	33	..	2,076	2,109	..	68	33	..	2,418
61. Diseases of the skin, cellular tissue, bones and organs of locomotion	183	2,952	1,181	4,316	39	13	194	39,653	16,079
62. Congenital malformations and diseases of early infancy—									
(*a*) Congenital debility (children under 1 year) ..	12	18	21	51	3	4	1	247	218
(*b*) Premature birth (children under 1 year)	2	51	42	95	23	20	..	53	42
(*c*) Injury at birth (children under 1 year)	2	6	29	37	2	16	..	26	32
63. Senility	..	5	7	12	..	..	1	8	7
64. External causes—									
(*a*) Suicide	..	2	..	2	2	..	..	4	9
(*b*) Other forms of violence	288	3,516	1,003	4,807	137	33	151	40,606	11,856
65· Ill-defined causes	17	462	170	649	21	12	23	1,124	633
66. Malingering	..	7	..	7	..	..	..	65	2
67 Ante-natal supervision	8	..	343	351	..	5	12	..	11,107
68. Normal living babies	13	921	800	1,734	28	12	39	921	1,014
69. Post-natal supervision	..	87	115	202	..	4	1	3,136	3,239
TOTAL	1,038	22,078	11,224	34,340	1,385	483	914	252,311	134,619
70. Examinations	3	226	62	291	..	..	1	79,537	11,326
Dispensaries	..	..	..	..	..	..	..	438,512	273,789
GRAND TOTAL ..	1,041	22,304	11,286	34,631	1,385	483	915	770,360	419,734

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